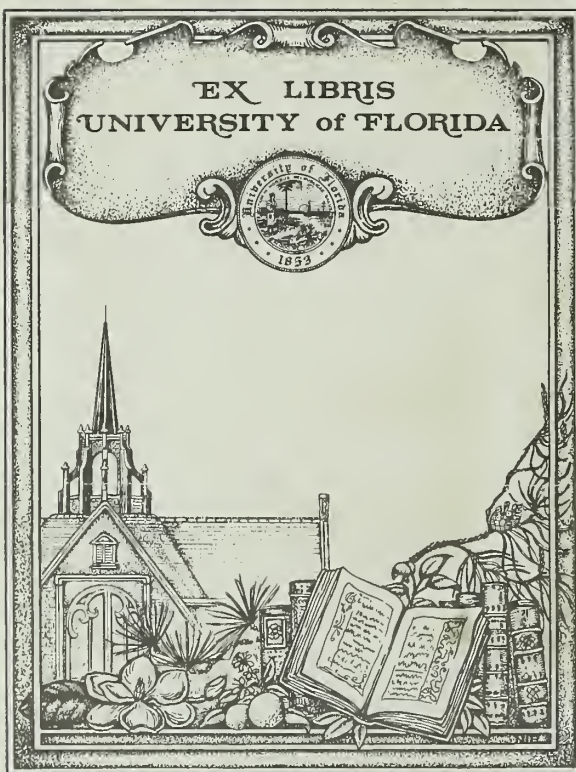




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# Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM



FLARE

JANUARY - FEBRUARY 1986

# Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

A Department of the Army Publication

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On the future battlefield, many infantrymen will live and survive with what they carry on their backs.



# USAIS

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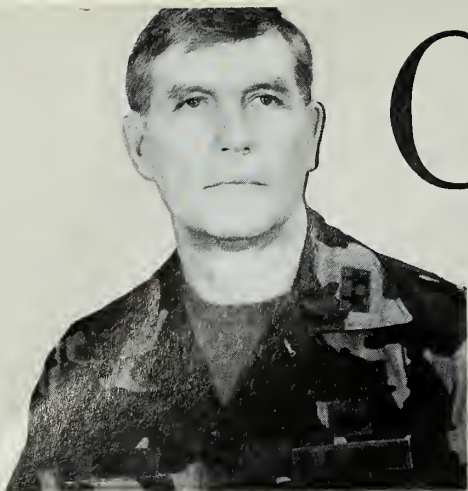
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# Commandant's NOTE



**Major General John W. Foss**

Chief of Infantry

## RANGER TRAINING

The battlefield's demands on the infantry are increasing. As usual, it seems that everything is getting harder instead of easier. The introduction of the Bradley fighting vehicle into our mechanized infantry units has demonstrated the critical mounted and dismounted task for infantry leaders and emphasized the fact that our Bradley leaders have to be good to handle them.

At the same time, the light infantry concept has added another dimension of difficulty, what with the requirements for light units to maneuver in areas behind the enemy's front lines and to operate in the toughest terrain.

The very nature of the combat role that has been postulated for our light infantry units requires those units to rely heavily on aggressive and innovative small unit leaders. These highly trained and tough soldiers will move and fight both individually and in units in dense forests, along high mountain ridges, in constricted urban terrain, and frequently under night and foul-weather conditions. They will live and survive with what they carry on their backs.

With all of the increased demands on our infantry leaders, there has come a great demand for and interest in the Ranger Course and in Ranger training for both our mechanized and our light infantry units. Our light infantry units in particular, I believe, must have a high ratio of Ranger-qualified personnel, particularly in the leadership positions, because Ranger training, in simple terms, is leadership training.

Ranger training stresses leadership, toughness, and confidence and uses patrolling to train and evaluate selected NCOs and officers in specific leadership skills. And nowhere in the United States Army are these leadership skills more important than at the infantry squad, platoon and company levels. To lead and win on the modern battlefield, our squad leaders, platoon sergeants, and platoon leaders must be inspiring leaders, physically and mentally tough, and tactically proficient in small unit skills. Ranger training is the best way to instill these characteristics.

One way of infusing Rangers into the new light infantry divisions is to season the units with some Ranger-qualified personnel initially and then allow them to grow their own, working through the Ranger School's quota system. This method has proved highly successful in the 7th Infantry Division, which, over the past 18 months, has had more than 200 of its own soldiers qualified as Rangers. Although proportionally more Rangers are now being assigned to light divisions than to heavy divisions, it is only a matter of time before we have worked our way through the Ranger assignment hiatus created by the activation of the light divisions. Then our heavy divisions will receive their fair share of Ranger-qualified personnel. In the interim, we are devising schemes that will allow all new Regular Army Infantry second lieutenants to attend Ranger School. This, coupled with a coming increase in the number of classes, should place enough Ranger-qualified soldiers in the heavy divisions until we can get caught up.



To meet these increased requirements, Ranger classes at Benning will be expanded in Fiscal Year 1987 from the current 14 classes of 150 students each to 14 classes of 220 students each. This increase (from a total of 2,100 in Fiscal Year 1986 to 3,080 in Fiscal Year 1987) should produce about 1,000 additional Rangers each fiscal year, and further expansions are being considered for subsequent years.

Until this expansion can fully meet the Army's training requirements for Ranger-qualified personnel, spaces will be allocated first to units — with Ranger and infantry units having priority — and to Infantry officers. For other units, the following branch priority has been established: Field Artillery, Armor, Combat Engineers, and Military Police. Any remaining allocations will be distributed to volunteers in the same order of branch priority. For the past six months, all infantry lieutenants who have completed the basic course and have volunteered for Ranger training have received quotas to attend.

Unfortunately, even though our Ranger training spaces are at a premium, many of them are being wasted. Some soldiers who are scheduled to attend never show up; and some of those who do are released immediately because they do not meet the School's prerequisites. (There are no waivers for the Ranger APRT standards or the Combat Water Survival Test.)

I therefore strongly encourage all commanders who send soldiers to Ranger School to get involved and reduce this waste of critical training spaces. In April 1985 I sent a message to all units explaining the entrance requirements. All units should use it

in preparing the necessary paperwork and in testing prospective Ranger students. Unit commanders who have been reluctant in the past to send their soldiers to Ranger School for fear of losing them should know that their soldiers, when they graduate, are now guaranteed 12 months in the units that sent them to the School.

To make sure we are training Rangers the way they're going to fight, we at the Infantry School are constantly reviewing and analyzing the training offered by the Ranger Department. Some of the recent changes include reducing the student's load to mission essential equipment only; reducing (from 15 to 9) the size of patrols for squad level training (when resources are available); adding more squad patrols to the Benning, Mountain, and Desert Phases; using combat drills to develop aggressiveness and tactical competence; and increasing the amount of time devoted to land navigation and to practical exercises.

A major change in the course, which took effect last fall, was the move of the seven-day Desert Phase from Fort Bliss, Texas, to Dugway Proving Ground, Utah. The terrain at the new location — salt flats, sand dunes, foothills, and desert mountains — is ideal for Ranger training. This training begins with an airborne assault into a Middle East scenario and remains tactical to the end.

I have been greatly encouraged by the general toughness of training throughout the Infantry; it is an indication of our determination to have the best-trained and best-led soldiers in the world.

---

As I leave Fort Benning, I need to give you an update on the status of the Infantry in the United States Army. The renewed emphasis on infantry in all its forms over the past two years is paying off. We're a healthy force now, but we can get better.

The Bradley fighting vehicle has settled in and is performing extremely well. Some critics remain (only a few of whom understand combat) who would march us back in time and capability, but I believe we can overcome their criticism.

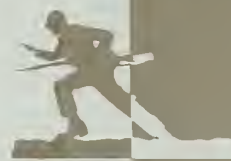
Light infantry has grown and is now a solid member of the infantry team. The conversion of the 7th Infantry Division's battalions is complete and that of the 25th Infantry Division's battalions is in progress,

as is the formation of the battalions of the 10th Mountain Division.

The advent of the 75th Ranger Regiment and of the 3d Ranger Battalion, and the expansion of Ranger training are having a positive effect on our force. We have made improvements in the training of our Infantry soldiers; new lieutenants and captains, and new equipment and weapons are on their way to our units.

Much more remains to be done in every area—training, tactics, weapons, and equipment. I know that all of our Infantrymen will give my successor, Ed Burba, the same great support they have given to me and to the Infantry School. (*General Foss now serves as commander of the 82d Airborne Division.*)

# INFANTRY LETTERS



## NIGHT ATTACK

Your September-October 1985 issue, as always, contains some stimulating material. Lieutenant Colonel William A. DePalo's article, "Dismounted Night Attack" (p. 26), prompts these comments:

Technological developments have brought no less than revolutionary changes in night combat. Image intensifiers, thermal imagers, ground radars, seismic sensors, and an array of other surveillance devices are changing everything. Darkness no longer conceals, no longer negates the advantages of the defender, and no longer simplifies the problem of attaining surprise as it did in the past. Night operations undertaken using the traditional night doctrine that stems from World War I could easily prove more costly than the same operations undertaken in broad daylight.

The 1st Battalion, 10th Infantry's experience in REFORGER 85 was undoubtedly valuable training and reflects high credit on the unit, but it does not seem to have added much in the way of critical night combat skills. Even the scenario is troublesome. It is difficult to accept that a competent enemy strong enough to challenge the advance of a mechanized division would so ignore the basic requirements of security, surveillance, and outpostting that heavily laden company-sized columns could penetrate a distance of 14 miles and cross an unfordable river without being detected. Given the level of opposition, a continuation of the mechanized advance would seem to have been the more productive move.

But that point aside, we were not told any of the crucial details about how the reconnaissance was conducted; whether reconnaissance teams were left in place to observe and report enemy movement; the use made of other surveillance means; route selection and techniques of navigation; the formations used by the three col-

umns; consideration given to diversions/covering operations; how night vision devices were allocated and used; plans for the use of supporting fires, smoke, illumination; course of action to be pursued in the event of detection or solid enemy contact; and other similar matters. These details are far from trivial. Technology has given them new importance — and demands new approaches. Traditional doctrine does not recognize that the enemy will have a night vision capability and therefore no longer provides adequate guidelines.

Physical conditioning, load-carrying capability, and forced marches are important training goals, but they do little more than scratch the surface when it comes to effectiveness in night combat. The point of this then is to suggest that all military units have their work cut out for them when it comes to preparing for fighting at night. They simply face a new ballgame with new rules and must learn those rules if they intend to play successfully.

I have not seen the recent TRADOC study that led to the decision to procure night vision aids of one type or another for every member of the Army squad. But I suspect, judging from its effect, that it would get units started in the right direction. In any event, you have given us an important, provocative article on a subject that needs more attention.

One final point, on the combat load. You may not be running a "Nightmare-of-the-Month Contest," but I would nominate this one for such a competition: Explaining to the late Brigadier General S.L.A. Marshall why mechanized troops, tasked with conducting a dismounted 14-mile trek through foot-deep snow and

conducting a river crossing and a night attack, were burdened with 60-pound rucksacks. Marshall's classic *The Soldier's Load and the Mobility of a Nation* is still in print (MCA, Box 1775, Quantico, VA 22134, \$2.75 postage included). It's 120 pages of worthwhile reading.

J.E. GREENWOOD

COL, U.S. Marine Corps (Retired)

Editor, *Marine Corps Gazette*

## MISSING THE TARGET

Lieutenant Colonel Wayne A. Silkett's article "72 Ways to Win Bigger" (September-October 1985, p. 38), in which he proposes turning 72 men in an infantry battalion into snipers, is certainly unique. His analysis of the deteriorating marksmanship skills in the U.S. Army is correct, but creating 72 snipers per battalion is not the answer.

What the Army needs to do is to return to a known distance basic marksmanship program with dedicated full-time marksmanship instructors. Training each soldier in proper shooting fundamentals will bring results on the modern battlefield.

Sniper training and employment by the U.S. Army at the present time is poor at best. By reviving formal sniper training and combining it with an accurate bolt action rifle, the Army could have an effective sniper program.

On the rifle battalion level, under Division 86, four or five sniper teams would be more than enough. Seventy-two snipers per battalion, even if used as teams, could never achieve any degree of proficiency or be accurately trained. The key to their effectiveness would be their proper employment as an additional supporting arm. Used correctly, they could be effective in an urban environment.

**We welcome letters from our readers and print as many of them as we can. Sometimes it takes a while before we find room. But keep writing on topics of interest to our readers, and we'll do our best to publish your letters, sooner or later.**



S.L. WALSH  
USMC Scout Sniper Instructor  
School  
Quantico, Virginia

I would like to comment on Lieutenant Gary W. Ace's concept of having a platoon leader carry an M203 (see letter, September-October 1985, p. 5). I agree, and there is another reason or two why this is a good idea.

A minor point is that enemy snipers do not expect leaders to carry grenade launchers. Just as a .45 pistol, or now a 9mm, on an infantryman's hip draws the interest of a sniper, a grunt with a grenade launcher would present a less tempting target, for a while at least.

Another aspect may be more important:

An old buddy of mine, Tony Avgoulis, who commanded the Ranger Company of the 101st for one of his five tours in Vietnam, carried an M79. When the troops were hotly engaged, the distinctive “bloop” from the CP area let them know that “the old man” was taking an active part. General Pickett’s plumed hat thrust high on his saber, heading for the angle at Gettysburg, served the same purpose.

The image of an officer showing the way is a crucial component of leadership.

STEPHEN Z. BARDOWSKI  
SGT, Cavalry  
Pennsylvania Army National Guard  
Mechanicsburg, Pennsylvania

I have used execution matrixes on overlays for several years and, except for small improvements, had never thought to expand the information on the matrix. At the same time, I had been trying to figure out a way to make task force operations orders shorter and simpler.

Major Robert J. Henry, in his article on a modified matrix ("An Execution Matrix," September-October 1985, p. 34), has shown us a way toward that goal and has probably written the opening chapter in the search for the ultimate execution matrix.

Here is my contribution. All I did was include more elements from an operation, and its order, to fill up an 8½ by 11 page with useful information. Obviously, anyone using this form would have to have it preprinted before an operation began. After the operation had been planned, about a dozen of the forms could

be filled out to distribute along with the overlay at the oral task force order. This would speed up the company team's planning, because there would be no need to wait for a written order.

Some of the information on the matrix, like call signs, could be filled out in pencil and updated by its user. Other items, like unit status and locations, could be revised as needed. The matrix itself would be given a two-digit identifying number, which, along with varying subject numbers and letters, would allow it to be used as a simple message code during its operational life.

TF CALL SIGN F7N				ON HAND DETACHED NOT USED ADA CEWI		TANK MECH TOW ST ENG		ATTACHMENTS 4/2-80 BORN 11/2/2/4-80 4/2-104 ENG (BS) 3/8/111 ENG (BORN) F3T27 4/D/3-522 VULCAN (BS) M7027						
CDR 13 S3 67 FSO 48 XO 57 S3A 18 ENG 56 S2 64 S4 39 NCS 72														
UNIT - STATUS	TM A	G	B(-)	G	TM TANK	X	DELTA	G	E(-)	G	SCOUTS	G	4.2	G
CALL SIGN	R2A		N5C		07D		EOP		LSM		P2Q		B5X	
TASK ORG	1	X	1	X	1	X	1	X	1	X	1	X	1	X
	2	X	2	X	2	X	2	X	2	X	2	X	2	X
	3	X	3	X	3	X	3	X	3	X	3	X	3	X
	4	X	4	X	4	X	4	X	4	X	4	X	4	X
	5	X	5	X	5	X	5	X	5	X	5	X	5	X
	7/2-804		1/2-114		1/2-114				3/2-114		1/2		1/2	
			1/2-104						1/2-2		1/2		1/2	

TF MISSION - INTENT TF 2-114 DEFENDS IN SECTOR 120930 JAN 85 FROM NB430216 TO NB415255. WE ACCEPT BATTLE HANDOVER, ASSIST THE WITHDRAWAL OF THE COVERING FORCE AND DESTROY THE ENEMY WEST OF MUDDY TOWER. WE WILL RETAIN SP LION AND KILL THEM AS THEY MASS TO BYPASS IT AFTER CROSSING THE RIVER. THE BDE CDR WANTS US TO FORCE THE SECOND ECHELON NORTH INTO 2. ARMOR TF FIREPOCKETS.

5 OCCUPY	TIGER KILL 3	STRONGPOINT LION RED BLUE	OWL WHITE TRIP 3	CAT YELLOW CP22	ROBIN RED BLUE	SCREEN TF FROM BORN PL SALLY O/O MAY PP 788	GRID NB428305
7 PREPARE	CUB KILL 3	SILVER TRIP 25	FLY BLACK GREEN	DOG PINK CP17	MINK PINK TRIP 28	SCREEN TF RT FLANK BACK TO CP6	O/O GRID NB435297
6 RECON BELOW OF INITIAL BP OP/LP 1	BLUE BLUE	— BLUE	— TRIP 3	YELLOW CP22	RED RED	CP9 TO CF PP 788	O/O GRID NB448112
4 RESERVE COUNTER ATK 2	— LION	— —	TF RES LION	— CAT	— ROBIN TIGER	O/O SPLIT ECHELONS	O/O GRID NB446121
MISSIONS	O/O ECHELON OBSTACLE #6 DEFEND AND RETAIN	STRONGPOINT DEFENSE DO NOT WITHDRAW WITH OUT ORDERS	DEFEND AND DESTROY FIRE FOR TM A CATX INTO LION TF RESERVE	DEFEND AND RETAIN	DESTROY FROM BATTLE POSITIONS ESTABLISH ALT TOL O/O	ASSIST BH THROUGH CF TANGHUA PP AND TF SECTOR SCREEN RIGHT FLANK DETACH GSR TMS TO TF CONT O/O	DISPLACE MY SECTION ONLY SUPPORT SCOUTS W/SMOKE & ILLUM PRIORITY TARGETING TO TM A & CO D ON PL
OBSTACLES	3/8/111 PREPARE OB #6. PRIORITY COUNTERMOVEMENT PROTECTION						
LOCATIONS	3 TOL NB413645	3 CBT TNS NB473682	4 FLD TNS NB413825	LRP 1 NB473822	LRP 2 NB431121	LRP 3 NB431832	MCP NB428182
MOVEMENT ORDER	O/O SCOUTS TM TANK	CMDD GP TOL	TM A	B(-) 4.2/VULCAN	3/8/111 EX CBT TNS	ECHO (-)	DELTA
MOPP	1	2	3	4	5	6	7
	OEG 50 RADS	ADA TIGHT	MOVE AMBER	REXON TWO	SP 1430	RP 10145	PUR 8000 5000

My suggested matrix does not present a particular battle scenario or pretend to be the final edition. It is just an expanded version of Major Henry's excellent contribution. If we are to advance in our profession, infantrymen must continue to improve on each other's ideas and actions. *INFANTRY* magazine helps by providing a forum for these ideas.

NOYES B. LIVINGSTON III  
CPT, Infantry  
Texas Army National Guard  
Houston, Texas

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### FSB GOLD REUNION

On 21 March 1967 a large VC-NVA force clashed with units of the 3d Brigade, 4th Infantry Division, at Fire Support Base GOLD near Suoi Tre, Republic of Vietnam. The units included the 2d Battalion, 77th Artillery; 3d Battalion, 22d Infantry; 2d Battalion, 12th Infantry; 2d Battalion, 22d Infantry (Mechanized); and the 2d Battalion, 34th Armor.

A 20th anniversary reunion is being planned to commemorate this outstanding combined arms victory. The reunion is scheduled for 20-21 March 1987 at Fort Carson, Colorado, home of the 4th Infantry Division (Mechanized), which is participating in this event to honor its Vietnam veterans.

The principal speaker at the banquet will be General John W. Vessey, Jr. (Retired), former Chairman of the Joint Chiefs of Staff, who commanded the 2d Battalion, 77th Artillery during the battle.

Anyone who is interested in attending this reunion or who would like more information may write me at P.O. Box 775, Ferriday, LA 71334, or call (318) 757-8500/2331. (I am a veteran of the 2d Battalion, 34th Armor.)

LARRY MOSS

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### MILES vs LIVE FIRE

I was disappointed to read Lieutenant Mark A. Dorney's comments (September-October 1985, p. 4) about my article "Concerning Safety" (May-June 1985, p. 10), because they represent some

widely held and incorrect views of the details of close combat and training for close combat.

Under certain circumstances MILES is an excellent training device. It is inherently incapable, however, of doing many important things that live ammunition does quite well. MILES does not provide immediate feedback for misses to a firer and only very near-miss feedback to a target. This prevents a firer and his leader from correcting his aim. With live ammunition the impact of a bullet on bark or dirt, or a visible tracer, gives a definite reference point that can be used to correct errors in aim or fire control. MILES lacks anything resembling a tracer element, and this makes it all but useless at night (near ambush being a partial exception).

MILES is stopped cold by the lightest concealment, while a soldier firing live ammunition at a target behind a bush could be given credit by an evaluator for suppressing or killing the target. This defect tends to warp tactical perceptions in training. Doing away with all natural concealment devalues training even more.

Finally, because MILES is a straight line-of-sight system, which does not correspond to the trajectory of a bullet, it cannot teach much of combat marksmanship. MILES was never intended to substitute for live ammunition but to improve the training value of blank ammunition.

Live grenades are usually allocated at one or two per combat soldier per year, which tends to make scoring a live grenade range pointless. All this is irrelevant, however, because such things as accuracy of throw and safety procedures can be taught quite well with inert grenades and practice fuzes. What cannot be taught is the confidence and courage it takes to use a live hand grenade under combat conditions. This confidence and courage can be taught by placing a man just outside a bunker and having him put a grenade inside the bunker (which is at least as safe as placing him inside the bunker and having him throw the grenade out). Live grenades are issued to train soldiers morally. They must be used for that purpose.

Lieutenant Dorney suggests that such

demolitions as may be required for post projects be done by soldiers, and I endorse that suggestion. Such projects are not as common as is implied, of course, but the idea still has some value. What is missed, and this is the real flaw in his thinking (he is not alone in this), is that what would be taught by doing this is mere mechanical skill. Setting off all the demolitions in the world will not prepare a soldier for the day when he must crawl forward with a satchel charge, place it, light the fuze, and crawl back to cover, the whole time trusting in his comrades to keep the enemy suppressed. This can be taught only by employing live demolitions as part of normal tactical training with live ammunition.

Lieutenant Dorney hails from a branch (field artillery) in which mechanical skills are held in highest esteem, and rightly so for that branch. It would be well for the Army as a whole, however, if it were widely understood that in the ground-gaining arms mechanical skills must play second fiddle to moral strength and physical courage, for only with courage can mechanical skills be used to advantage.

THOMAS P. KRATMAN  
CPT, Infantry  
Fort Stewart, Georgia

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### REVAMP ECHO COMPANY

In their recent articles, Captains Michael S. Hackney and George E. Knapp have made strong cases for the versatility and effectiveness of the new antiarmor company. But without the proper equipment and support, it will not be able to live up to its potential. (See "Echo Company: The Fifth Player," July-August 1985, p. 20, and "Echo on the Battlefield," September-October 1985, p. 30.)

Captain Knapp alludes to many of Echo Company's major weaknesses. With no recovery vehicle organic to its maintenance team, no XO track, limited NBC equipment, no camouflage nets, no ring mounts for its wheeled vehicles, no available FIST, no primary radio telephone operators for the command tracks, and no cook section, Echo Com-



pany can be easily supported only through attachment or extensive juggling of battalion assets.

I firmly believe that there is a strong case for revamping the battalion and antiarmor company TOE. Echo Company should be regarded as a maneuver company, particularly in a heavy division, instead of as a much-diminished combat support company. Antiarmor operations could be more aggressive and sustainable, regardless of how Echo Company was employed.

As a former antitank platoon leader and now an Echo Company XO, I strongly urge the Infantry School to reconsider our support needs. A table of organization and equipment designed only for attachment seriously affects a unit's ability to conduct sustained combat operations.

WILLIAM H. HAYES

1LT, Infantry

Nebraska Army National Guard  
Lincoln, Nebraska

## MORE ON COMPANY E

Captain Michael S. Hackney's article entitled "Echo Company: The Fifth Player" (July-August 1985, p. 20) is an incisive piece. As a member of that small but growing fraternity of former antiarmor company commanders, I would like to add my thoughts to his.

The antiarmor company was not envisioned as a maneuver company; its platoons were to be parceled out to its task force's sub-elements. During my tenure as commander of Company E, 1st Battalion, 10th Infantry, however, my unit and sister Echo Companies of the 4th Infantry Division (Mechanized) were often employed as single entities, but not in the traditional sense of maneuver as the mechanized infantry or armor company teams were.

My experience has demonstrated that the company is best employed this way.

A limiting factor in attaching antiarmor platoons to the mechanized and armor company teams (or attaching infantry and armor platoons to Company E) is the relative slowness of the ITV. The M901 series of vehicles simply cannot keep up with the M60 and the M113, especially during the final stages of an assault or during fast-moving operations.

In the offense, Company E can successfully fulfill its role of providing long range overwatching antiarmor fires by maneuvering to the rear of or adjacent to mechanized infantry and tank heavy teams either as a single entity or as dispersed platoons operating across the task force sector under the command and control of its own company headquarters. This centralized arrangement also keeps the maneuver commanders' span of control at a manageable level.

I concur with Captain Hackney's view of Company E's employment in the defense. Keeping the company "pure" allows the TF commander to mass fires along suspected avenues of approach into the TF battle position. When the TF moves from successive battle positions during a delay in sector, the centralized control of antiarmor elements is highly desirable. With his ITVs under the control of the Company E commander, the TF commander has a single point of contact on the battlefield; if the ITV platoons are attached to the infantry or tank teams, he must deal with as many as four commanders.

Captain Hackney discusses organizing the company into two platoons of six ITVs and one M113 each with the third platoon having eight ITVs and one M113. I believe that eight systems under the control of one platoon leader is too unwieldy. The best way to employ the techniques Captain Hackney describes is to organize the battalion's 20 ITVs into four platoons, each with five ITVs and one M113. This would mean adding one platoon leader, one platoon sergeant, and one M113 to the TOE. Organized in this manner, though, each platoon could es-

tablish a habitual relationship with one of the rifle companies to provide a degree of familiarity and interoperability when the situation does not dictate that the antiarmor platoons be attached out. (This arrangement does not mean that all four platoons would be attached out simultaneously; that would be the exception rather than the norm.)

An appropriate use of an ITV section or platoon that Captain Hackney does not discuss is to attach a section or platoon to the scout platoon when it is ordered to screen along or guard an exposed flank astride a high-speed avenue of approach. (Under the 4X5 ITV configuration, platoon, not section, employment would be the norm.)

Captain Hackney's brief discussion of the lack of recovery, medical, and mess resources to support an Echo Company points to a critical shortcoming in the current infantry battalion organization. In addition, I believe the battalion desperately needs a track-laying, armor-protected, ammunition-hauling vehicle. On a high intensity battlefield, missiles will be expended rapidly, thus increasing the requirement to re-arm far forward.

The lack of a fire support team is difficult to understand when one considers the current employment practices of battalion and brigade commanders. With twenty 13-power thermal sights, the antiarmor company has a great ability to see beyond the FLOT and interdict initial and follow-on enemy elements with indirect fires. The optics on the ITV make any vehicle a potential fire support vehicle.

An Echo Company should not be considered a combat support organization to be parceled out willy-nilly. But it does add a new dimension to the heavy force battlefield. What lies ahead now is a refinement of doctrine and organization; only then will the potential of the "fifth player" pay true dividends.

LEE F. KICHEN

MAJ. Armor

Slippery Rock, Pennsylvania



# INFANTRY NEWS



THE ARMY's 29th Infantry Division, famed for its D-Day action on Omaha Beach during World War II, was reactivated on 5 October 1985 at Fort Belvoir, Virginia. It is the only National Guard light infantry division.

Like the Active Army's light infantry divisions, the 29th is designed for quick response. About 10,500 troops from Maryland and Virginia National Guard brigades make up the division.

FIELD CIRCULAR 71-4, Combined Arms Live Fire Exercise (CALFEX), was printed in October 1985. It provides complete guidance for the development of live fire, combined arms training and gives the user a thorough list of planning considerations and a detailed formula for the coordination of resources including such factors as ammunition data, target emplacement guidance, and safety diagram procedures. Four sample scenarios are included, as are a sample LOI and control plans.

The circular was distributed to all members of the close combat (heavy) force down to battalion and squadron level. Units and activities that need additional copies may obtain them through the Armor School's Army Wide Training Support warehouse by writing to Commander, U.S. Army Armor Center, ATTN: ATZK-DPT-NRT (AWTS), Fort Knox, KY 40121.

THE ARMY'S Tank-Automotive Command has revised the payload and towing capacities of the commercial utility cargo vehicle (CUCV) and high mobility multipurpose wheeled vehicle (HMMWV) families. The loads may not exceed the limits (in pounds) shown in the accompanying table.

The payload includes any weight placed in or on a truck, including personnel, cargo, equipment, and the shelters on

VEHICLE	PAYLOAD	TOWED LOAD	GROSS VEHICLE WEIGHT
<b>HMMWV Family</b>			
M998 utility truck			
with troop seats	2,081	3,400	7,600
with 4-door soft top	2,247	3,400	7,600
M1038 utility truck			
with troop seats	1,954	3,400	7,600
with 4-door soft top	2,120	3,400	7,600
M1025 armament carrier	2,105	3,400	8,160
M1026 armament carrier	1,978	3,400	8,160
M966 TOW carrier	2,038	3,400	8,160
M1037 shelter carrier	3,126	3,400	8,600
M996 ambulance	1,482	3,400	8,600
M997 ambulance	1,856	3,400	8,600
<b>CUCV Family</b>			
M1008 cargo truck	2,900	3,160	8,600
M1008A1 cargo truck	2,600	3,160	8,600
M1009 utility truck	1,500	1,200	6,775
M1010 ambulance	2,080	N/A	9,555
M1028 shelter carrier	3,600	3,160	9,400
M1028A1 shelter carrier	3,600	3,160	9,400

shelter carriers. Towed loads include the weight of a towed trailer and its payload. Gross vehicle weight is the weight of a truck and its payload.

The M1008, M1008A1, M1028, and M1028A1 vehicles may tow aircraft that weigh up to 15,000 pounds, and the M1009 may tow aircraft up to 10,000 pounds, under special precautions and at

very low speeds.

Overloads are not authorized on CUCVs and HMMWVs. If a planned load exceeds the limits, the vehicle operator must either reduce the amount of equipment to be transported, transfer equipment to a trailer or another vehicle, or use a vehicle with a higher capacity.

THE DIRECTOR OF THE National Infantry Museum has sent us the following news items:

The fifth annual National Infantry Museum Five-Mile Run was held on 12 October. More than 2,000 runners participated. The race, which is supported by both the military and civilian communities, is the Museum's largest source of nonappropriated funds. These funds are used to purchase many important artifacts and "extras" for the Infantryman's museum.

At a ceremony on 5 November, four former members of the 84th Infantry Division (Railsplitters) presented a stained glass replica of the division's patch for hanging in one of the Museum's windows. The four men, all now retired from

the Army, served with the 84th Division during World War II, and presented the replica on behalf of the Railsplitters Association.

This replica brings to 22 the number of brilliant glass panels that hang in the Museum's windows. Dick Grube, the Museum's Director, says there is room for 18 more such panels. For those division associations or friends of the Army who might be interested in donating a panel, experience has shown that the costs run between \$100 and \$200 for each twelve-by-fourteen-inch replica.

On 21 November, Dr. Brooks Kleber, the Army's Assistant Chief of Military History, spoke at the dedication of a monument honoring all U.S. prisoners of war who died in captivity. Dr. Kleber



was a prisoner of the Germans during World War II; he was captured while serving with the 90th Infantry Division. The World War II period monument is a gift from the city of Columbus, Georgia; it was given to Fort Benning when street changes made it necessary to remove it from its original location.

Conservation work for the Museum on two historic flags has been completed by the Rocky Mountain Conservation Center in Denver. They are a 34-star U.S. flag, which was picked up on the battlefield after the fighting ended at Gettysburg in July 1863, and an extremely rare 2d Regiment, U.S. Colored Troops flag, also from the Civil War period.

Major (Retired) Hiram A. Duncan, a former member of the 503d Parachute Infantry Regiment, presented the Museum with the parachute uniform jacket and trousers that he wore on 5 September 1943 when he parachuted into Markham Valley on the island of New Guinea. This was the first combat jump made by U.S. paratroopers in the Pacific theater of operations during World War II.

A collection of medals, decorations, and documents that belonged to Major General Charles H. Muir has been given to the Museum by General Muir's family. As commander of the 28th Infantry Division in World War I, General Muir led his men through the Marne fighting in July 1918 as well as in the Aisne-Marne and Meuse-Argonne offensives.

Miss Virginia J. Hanson has donated two World War I mugs to the Museum. The mugs were taken by First Lieutenant Alvin E. Belden of the 123d Infantry Regiment, 31st Infantry Division, when elements of his unit overran a German trench.

An M48 tank and three new artillery pieces have been placed on the Museum's grounds — a U.S. M1887 cannon made at the Springfield Armory; a U.S. M1902 three-inch gun; and a French 75mm gun of the kind that was adopted and used by U.S. forces during World War I.

Other recent acquisitions include a Revolutionary War period musket and bayonet, and a Colt M1873 revolver. A rare palmetto-marked M1842 percussion pistol that was made exclusively for the South Carolina militia just prior to the War Between the States has also been

added to the Museum's weapon collection.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273, AUTOVON 835-2958, or commercial 404/545-2958.

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THE DIRECTORATE OF COMBAT DEVELOPMENTS has furnished the following news items:

•**Standardization.** In April 1986 the Infantry School will host a meeting of a special group of people who are dedicated to the promotion of standardization in their armies. The group will represent the working elements of the American, British, Canadian, and Australian (ABCA) standardization program.

In general, the tasks for the April 1986 meeting will be to review and confirm previous standardization agreements, originate and draft new agreements, identify new areas for cooperation, develop concepts, and exchange information.

The Infantry School's Commandant will open the session on 21 April, after which the School will hold a variety of infantry briefings and demonstrations and will host several social gatherings.

•**EXFOD.** EXFOD is the Army's acronym for explosive foxhole digger. The initial work on developing methods for digging foxholes by the use of explosives occurred in early 1953. Since then, many concepts and a few devices have materialized, but all have fallen short of the "ideal" EXFOD. The requirement to provide that EXFOD, however, still exists.

Recent infantry, engineer, and material developer actions may well give us an interim device that will be lightweight, quick and easy to operate, and reliable to use in difficult soils found in temperate zones.

•**Small Arms Projects.** The Infantry

School is working on several new projects in the small arms area.

A program to enhance the M16A2 by attaching an optical sight to the rifle is intended to increase the individual soldier's ability to engage targets at ranges of 300 to 600 meters. (See *INFANTRY*, September-October 1985, page 10.).

Another outgrowth of the M16A2 rifle program, the XM-4 carbine program, is an effort to develop a shortened version of the M16A2. The XM-4 is designed to be used by commanders, drivers, and other soldiers who need more freedom of movement than they have when using the rifle and more firepower than they can get with a pistol.

A third program, on the M60E3, is aimed at reducing the weight of the M60 machinegun from 23.2 pounds to 18.25 pounds, thereby also reducing a gunner's combat load.

Additionally, the Infantry School, working with the John F. Kennedy Special Warfare Center, is developing a new sniper rifle to replace the outmoded M21 system currently in the inventory.

•**Multipurpose Bayonet.** The Infantry School, in conjunction with the Army's Armament Research and Development Center, is aggressively pursuing a multipurpose bayonet that will function as a bayonet, a combat and field knife, and a wire cutter. (See *INFANTRY*, November-December 1985, page 8.)

This bayonet would be issued to infantry soldiers, to members of divisional engineer units, and to soldiers in special operations forces and would replace the present M7 bayonet and the numerous personal knives, wire cutters, and other such tools that soldiers now carry. It will weigh no more than 1.8 pounds and will be compatible with the M16 series of rifles and the XM-4 carbine.

User testing at Fort Benning is scheduled during the period February to May 1986.

•**JANUS Simulations.** The Infantry School will soon receive the hardware and software necessary to conduct JANUS simulations. JANUS, a computer simulation of the battlefield environment, uses color graphics to represent individual weapon systems (M1 tank, Bradley, TOW, AH64 helicopter) to simulate



combat and weapon effects at a near real time level.

It is supported by a VAX 11/780 minicomputer and software that consists of 20,000 lines of FORTRAN code. JANUS uses digitized terrain provided by the Defense Mapping Agency. The software allows the contour lines to be displayed graphically at a player's workstation, and permits a user to specify both enemy and friendly force structures. A user can also specify the numbers and types of units, weapon systems, and individual infantrymen.

During the simulation, the model computes the line-of-sight and range from an attacking weapon system to its target. Using probability of hit and probability of kill data, which is put into the system at the beginning of the simulation, the software calculates whether or not a target is hit and/or destroyed.

This high resolution computer simulation will allow the Infantry School to simulate changes in equipment and doctrine throughout the combat spectrum and will help considerably in the decision-making process as it relates to equipping and deploying the Army of the future.

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THE FOLLOWING NEWS ITEMS were submitted by the President of the Infantry Board:

• **Day/Night Reflex Sight (DNRS).** Since 1980, input the Infantry School has received from the field has indicated a need for a rifle sight system that would permit accurate day and night firing without an active infrared signature such as that which occurs with the infrared aiming light, AN/PAQ-4.

In 1983, the 9th Infantry Division initiated a quick reaction program document to expedite the fielding of a prototype day/night reflex sight (DNRS). The division tested that sight in the summer of 1984. As a result of that testing, the Infantry School judged the concept to be feasible and initiated the procurement of additional DNRS for testing by the Infantry Board.

The DNRS is a passive unity power sighting device, approximately three inches in diameter and six inches in length, with a 40-degree field of view and an illuminated pulsing maltese cross reti-

cle image. Two BA 1567 U (AA size) batteries provide the sight's power. With the batteries installed, the device weighs 21 ounces. When mounted on the M16 rifle, it straddles the carrying handle of the M16A2 rifle, with the sight optics to the left and the electronics to the right of the handle.

Although it is referred to as a day/night sight, the DNRS has no inherent night vision capability; firers must wear night vision goggles to sight on targets by viewing through the DNRS.

The capabilities of an M16A2 rifle equipped with the DNRS were compared with those of an M16A2 rifle with its integral iron sights (day) and equipped with the AN/PAQ-4 (night) during a concept evaluation program test conducted by the Infantry Board in October 1985.

Eighteen soldiers took part in a series of side-by-side comparisons during day and night live fire exercises using single-shot and three-round burst modes of fire to engage E-type silhouette targets at ranges from 50 to 580 meters. During the night firing exercises, the soldiers wore commercial single objective lens night vision goggles to provide their night vision capability.

The visual signatures of the systems were compared during the day and night by data collectors who used their unaided eyes, binoculars, image intensification night vision devices, and thermal viewing devices. Human factors and safety data were also collected during the test.

The test results will be used by the Infantry School to assess the DNRS's potential for future infantry application.

• **Physiological and Psychological Effects of NBC and Extended Operations on Mechanized Crews (Infantry P<sup>2</sup>NBC<sup>2</sup>).** With the resurgence of interest in the NBC contamination threat, a new dimension has been added to the survivability of armored vehicle crewmen. The requirement for crews to perform combat tasks for extended periods of time

while encapsulated at various MOPP levels is a critical one. A crewman's survivability is further challenged by the thermal stress that is imposed on him when he must wear chemical protective clothing while operating in warm environments.

Previous research conducted by the Army's Institute for Environmental Medicine and the Army's Human Engineering Laboratory examined the performance of armored vehicle crewmen under simulated NBC conditions for periods up to 12 hours.

In February 1984, the Army's Armor and Engineer Board (USAARENBD) conducted a limited investigation of NBC extended operations during a series of 60-hour exercises using a surrogate research vehicle (SRV). These exercises, conducted in winter without thermal stress, validated the need for further research into the effects extended NBC operations may have on vehicle crewmen.

A collaborative effort in August and September 1984 between the USAARENBD and the Army's Medical Research and Development Command (USAMRDC) assessed the capability of crewmen of M1E1 vehicles to operate in a warm, simulated NBC environment for up to 72 hours. This effort identified a number of endurance-limiting factors that required further investigation. The results also supported a need to conduct similar studies for crewmen in all types of armored vehicles.

During September and October 1985, the Infantry Board, in collaboration with USAMRDC, the Army Research Institute (ARI), the Army's Aeromedical Research Laboratory (ARL), the Walter Reed Army Institute of Research (WRAIR), and the Army Research Institute of Environmental Medicine (ARIEM), conducted a test at Fort Benning of the physiological and psychological effects of NBC and extended operations on mechanized infantry squads (P<sup>2</sup>NBC<sup>2</sup>) to assess the performance and endurance of mechanized infantry squads operating under simulated NBC conditions for extended periods. The test, conducted in two phases, addressed performance degradation over time and endurance. (See INFANTRY,

## INDEX

The 1985 Index to INFANTRY has been prepared separately and is available to anyone who requests a copy. Please address your request to Editor, INFANTRY Magazine, Box 2005, Fort Benning, GA 31905-0605.

July-August 1985, page 9.)

During Phase IA, four Bradley infantry fighting vehicle (BIFV) squads from the 29th Infantry Regiment took part in a series of repetitive six-hour scenarios throughout a scheduled 72-hour exercise. Each cycle required the squad members to perform selected ARTEP 71-2 tasks under MOPP-4 conditions.

The degree of effort each task required varied from light to moderately heavy exercise. The soldiers also wore instrumentation to monitor heart rate, core temperature, and respiration. During the last 45 minutes of each six-hour cycle, the squads participated in a hasty decontamination exercise and an exchange of MOPP gear. This was the only time the soldiers were permitted to remove their MOPP gear; during this period the soldiers could eat, smoke, or take care of their personal needs.

After three six-hour cycles, the soldiers were allowed to sleep for six hours. Testing was then resumed and continued until a squad was deemed combat ineffective because of personnel losses.

The test soldiers were withdrawn from the test when they neared their medical limits, or when they became functionally or psychologically incapacitated. All of the squads were able to complete 60 hours under the test conditions.

During Phase IB, two BIFV squads from the 29th Infantry Regiment and one M113A1 mechanized infantry squad from the 197th Infantry Brigade took part in the endurance phase of the test. The members of all three squads wore MOPP-4 gear continuously throughout the entire exercise.

The cyclic testing of Phase IA was repeated, without the hasty decontamination event to provide a respite, until the

squads were deemed combat ineffective. Under these conditions, the squads were able to complete 33 to 40 hours.

The test results will be used by the Infantry School to provide input to the Armor School for a draft field circular concerning extended combat operations in a chemically contaminated environment.

**HOT WEATHER BATTLE DRESS UNIFORMS** will be available for purchase in military clothing sales stores in March 1986 in Central America, Hawaii, Panama, Portugal, and Spain. They should be available in Europe, Japan, Korea, and the United States in April 1986.

New soldiers will begin receiving the uniforms in their clothing bags in February 1986.

## SWAP SHOP



Soldiers ought to receive immediate feedback when they fire their weapons. All too often, though, live fire and maneuver ranges do not offer this type of feedback, and the soldier does not really know whether his fires are effective. A little bit of planning can do a great deal to alleviate this problem.

Some simple "kill targets" can be constructed from the following materials:

- 120 feet of rope (old and worn out).
- One snap-link per target.
- Several hundred feet of 550-pound cord or old commo wire.
- Some old clothes.
- Empty MRE boxes.

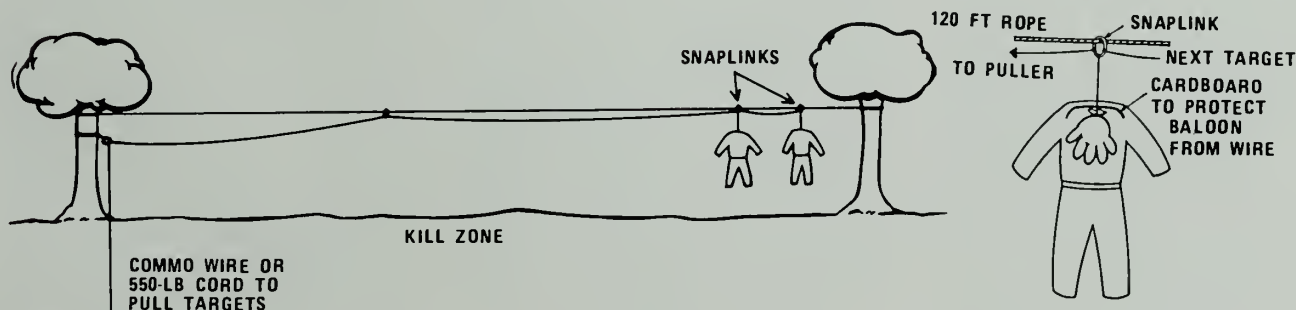
Chicken wire.

Heavy duty balloons or surgical gloves.

First, build a single-rope bridge between two anchors about nine feet above the ground. Then make the dummies out of the chicken wire and dress them in the old clothes. Put PIR/IR in the pocket.

The weight of each dummy will be supported by the inflated balloon or glove as shown in the sketch. When the dummy receives a killing shot, center of mass, the balloon will pop and the dummy will fall to the ground.

These targets can be used for ambush ranges or for other maneuver ranges to simulate fleeing or charging enemy forces. (Moving targets are much harder to "kill.")



(Contributed by Captain Timothy L. Canty, Company B, 1st Battalion, 32d Infantry, Fort Ord.)



# FORUM & FEATURES



## Bradley Platoon Tips

LIEUTENANT THOMAS T. SMITH

During my tour as a Bradley platoon leader, I learned that there is considerably more to know about the job than just the tactics and doctrine connected with leading the platoon. So, instead of debating those issues here, I want to discuss a few of the more practical and technical aspects of the job and to share some pragmatic solutions to a few problems.

First, a J-series (Bradley IFV) mechanized infantry platoon leader is responsible for about \$7.8 million worth of vehicles and equipment. The squad and platoon equipment in the platoon issue totals more than 800 items. Property accountability is therefore a critical aspect of the job.

Basic issue items must be inspected frequently. The vehicle bumper number should be etched on every piece of a Bradley's basic issue equipment, including the 60 or more 30-round 5.56mm magazines. Then the platoon leader can settle disputes between squad leaders over property custody with a simple statement: "If your bumper number isn't on it, it's not yours." He should confiscate all equipment of dubious heritage—items with multiple or scratched out bumper numbers, for example.

Our company had a lockable metal box (NSN 8115-00-679-5594) for each squad. In garrison, valuable basic issue items such as CVCs or PRC-68 radios, field phones, and the like were secured

in the metal box with a 200-series lock. The box was then locked inside the vehicle's troop compartment.

Neither a lock on the drivers' hatch nor the lock in place on the combat door, though, will keep a determined intruder out of a Bradley. He can get in through the coaxial access doors. For this reason, a heavy strap should be tightened across both of these access handles when in garrison.

### PREPARATIONS

When preparing to go to the field, a platoon leader must plan carefully and pay attention to detail. First, if everything that goes into the Bradley is not properly stowed, either the equipment or the vehicle itself can be damaged.

Items stowed under the seven-gallon water container or anywhere along the right interior ammunition shelf must be strapped securely. Just forward of the squad compartment's Halon internal fire extinguishers is a small opening in the right side of the turret basket. Loose equipment has a nasty habit of going through this hole and causing damage to the turret or the fuel cells.

There are also openings in the turret step from the squad compartment, and any unsecured items—even a plastic canteen—that is allowed to float around in the turret can bounce through one of

these openings into the turret base and cause extensive damage when the turret is moved.

A tool bag stowed in the engine compartment must be fully secured with straps, or it will slide off the stowage shelf and into the right final drive.

The cleaning rods and boresight adapter for the 25mm chain gun are very expensive and easily damaged. These can be stowed in an extra M60 spare-barrel bag ordered from the arms room.

Rucksacks are stowed under each troop seat, and their contents should be standardized to include wet weather gear, MOPP suit, one ration, and ammunition.

Since there is no storage space for the PVS-5 night vision device, in our company the carrying case was strapped under the Bradley commander's seat.

The two net bags and two pole bags that make up the camouflage screen system for the Bradley can be strapped to the trim vane—the net bags on the far right side, one above the other, and the pole bags horizontally, one above the other. The round base of the pole bags must be up against the net bags, or they will obscure the driver's vision.

At the National Training Center at Fort Irwin, we found that each Bradley could carry ten rolls of concertina wire and six pieces of six-foot PSP steel matting for overhead cover. Wire and PSP can be strapped to the side of the vehicle, anchored by the armor skirt-lifting handles.

Eight rucksacks can be strapped to the back of the bustle rack. (This is not possible in forested terrain, but it worked well in the desert.)

Other matters, too, need attention before going to the field.

The seven-gallon water container is a good feature of the Bradley, but the system is not designed to allow a soldier to fill his canteen, just his cup. Soldiers who try to fill their canteens bend the water container nozzle up, causing tears in the rubber gasket or cracks in the plastic. The solution my platoon implemented was to put a clear plastic hose (3/8-inch interior diameter) on the nozzle with a small automotive clamp. Total cost, 13 cents.

The two hull drain plugs must be checked constantly to make sure they are tight. If they are allowed to loosen and hang down, they can bend and become unserviceable.

The driver should be issued a PVS-5 battery. If the power cable to his AN/VVS-2 night vision viewer ceases to function, he can install that battery and continue to operate.

In our company each squad was issued a good pair of bolt cutters (NSN 5110-00-596-9102) with 12-inch handles. These are a great help in breaching wire obstacles and also in clearing wire from the final drive and the tracks of the vehicle. In garrison the bolt cutters were stored in the arms room.

If standard antenna tie-downs are used to tie the antennas back on the Bradley, they seldom stay in place, and when they snap free the clip and rope tend to wrap around the turret. In the field, our platoon used half-inch cargo straps near the antenna base to correct this problem.

## OPERATIONS

There are also some things that can be done to help matters during operations.

If a map is laid on the turret, it will blow off and disappear just when it seems it is needed most. (The Bradley goes very fast.) Two maps with operations overlay should be prepared. One can then be stored in a safe place and the other put on the turret, but under the bunji stretch

cord hooked from the base of the aircraft sight to the lip of the gun casement. A small piece of green canvas can be used to cover the map to prevent it from being seen from the air.

Two small plastic call-sign and frequency boards should be put on the vehicle—one taped to the turret just in front of the commander's hatch, and the other inside the turret on the coaxial access door. Call signs and frequencies for two days can be put on each of them in grease pencil. (This is better than having all those ink scribbles on hands and arms.)

For better command and control, although our battalion had standardized its system for vehicle identification markings, our platoon used some additional markings when in the field. We put 10-inch strips of green tape on each side of the turret. The platoon leader's vehicle had a V, the first squad's one vertical strip, second squad two horizontal strips, and the third squad three vertical strips. On many occasions, these were a great aid to command and control. At night the tape markings were visible in the thermal sight at short range whereas the standard paint markings were not.

For dismounted operations, the new PRC-68 squad radio cannot be depended upon. The platoon leader needs a PRC-77 on a backpack aboard his vehicle. Since he does not have one, he can take one from a squad leader. Although this leaves that squad with only one radio in the turret, a platoon leader has to be able to communicate. (Company commanders tend to get excited when they can't talk to their lieutenants.)

The PRC-68 squad radio is useful in the defense, however, and its range can be improved with the attachment of a PRC-77 short whip antenna. Once, in a mounted movement to contact at night, my platoon radio in the turret went on the blink, and I used the little hand-held PRC-68 to control the platoon. (I had no way of receiving on the platoon net, but at least my platoon members could hear me.)

Command and control has been improved by the use of fighting sections with the Bradley. The platoon leader and one squad as wingman form the first section, the platoon sergeant and one squad

form the other. When the platoon dismounts, the platoon sergeant controls the vehicles. When the platoon leader and all the squad leaders are on the ground, the assistant squad leaders become vehicle commanders. It is important for the platoon sergeant not to become too fond of one vehicle but to rotate every other day.

The platoon leader's wingman should always be on the right side of the platoon leader's track. Although the driver of the wing vehicle can see well to the left, his vision to the right is blocked by the engine compartment.

## SIGNALS AND SOPs

Flag and arm signals are also critical to command and control, and SOPs concerning these signals must be practiced often.

SOPs should also be used to distribute firepower during the defense or movement to contact. One vehicle per section should be designated to engage BMPs or soft-skinned vehicles with its 25mm chain gun. The other vehicles of the section should be prepared to engage tanks with their TOW missiles. (TOWs should always be up in the defense or on short halts.)

In the defense, Bradley drivers should not be allowed to leave their hatches open, because an open hatch will prevent the turret from rotating, and if an enemy suddenly appears the gunner will not be able to engage him.

When the unit is mounted and receiving indirect fire, the commander's hatch should be in the first open position instead of fully closed. This improves visibility and seems to offer about as much protection as when it is fully closed.

Another consideration on hatches is the noise from the cooler motor on the thermal sight, which can be heard up to 50 meters in front of a position. In the defense, if the commander's hatch is left open for ventilation and the gunner's hatch is closed, this noise can be reduced by half. (The thermal sight is also power hungry, so vehicles should be started at least once an hour in the defense.)

During operations, the Bradley's speed should be thought of in terms of "dash"



speed for moving quickly between firing or overwatch positions, or for rapidly repositioning forces. It should not be used for rushing forward into trouble or uncertain situations.

Because of their vastly increased supporting ranges, Bradley platoons are often widely dispersed. They should therefore be well-versed in self-recovery. Platoon leaders should practice tow-starting and recovery procedures. In our company, each platoon leader was issued his own set of slave cables with NATO adaptors. This greatly reduced the maintenance team's headaches in finding and jump-starting dead vehicles.

Another technical aspect of the platoon leader's job is Bradley gunnery.

Before each Bradley gunnery exercise, our company had a solid pre-gunnery training period of about a week. At the end of the week a gunners skill test was administered to Bradley commanders, gunners, and assistant squad leaders. This is important both for training new gunners and for refreshing old skills. (Even the platoon leader's radio-telephone operator should be trained as a gunner at every opportunity.)

Fire commands are essential to effective, efficient gunnery. The crews must be taught to use proper fire commands instead of taking the "There's a target; let's shoot it" approach. (Tankers seem to take proper fire commands much more

seriously than infantrymen do. It may be because they have had about 50 years more experience at turret gunnery than we have.)

Range estimation is also a key to good gunnery. At every opportunity squad leaders should be trained on range estimation. The choke sight in the Bradley gun sight works well if the soldiers practice with it.

Several precautions need to be taken during gunnery to protect the weapons themselves.

Our battalion had several incidents in which TOW boresight telescopes were damaged because they were left in the launcher when it was lowered. We added a red tag to the boresight kit, and it was hung from the TOW launcher's UP/DOWN switch to remind the crew to remove the telescope.

The 25mm chain gun is a fine weapon, but it has close tolerances in the feeder link-guide system. When 25mm ammunition is loaded in the ready box, every link-guide should be carefully cleaned and lightly lubricated. This will eliminate any malfunctions caused by debris or dirt in the feeder's link-guide rails.

In a dry, dusty environment, dust will collect on the intake grill screen. When the 25mm fires, this dust is pulled out of the intake screen and into the air, blinding the gunner. To eliminate this dust problem, a platoon vehicle should carry

a five-gallon water can in the bustle rack so that the Bradley commander can occasionally splash water on the intake screen.

These are only a few of the problems and a few of the solutions for Bradley platoon leaders. There are some other problems, though, that leaders need to think and talk about and try to solve. For example, the platoon leader has an M25 protective mask so he can communicate through the vehicle communication system, but this mask does not have a voice emitter. When in the dismounted role, the platoon leader cannot talk on the PRC-77 radio and cannot shout instructions that are audible more than two feet away. In addition, the filter hose becomes tangled in every vine and tree branch within a grid square. I have seen platoon leaders throw the mask to the ground in frustration, preferring to breathe gas rather than wear it.

What do we do now, lieutenants?



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## The Platoon Team

**CAPTAIN JOSEPH K. MILLER**

During maneuvers at the National Training Center, and elsewhere as well, a pure infantry or armor platoon operating as part of a company team of Bradley IFVs and Abrams tanks has occasionally found itself in desperate need of closer support from the weapons of the

other branch's vehicles.

As an example, let's assume that such a company team is conducting a movement to contact to eliminate the remaining elements of an enemy motorized rifle regiment before a U.S. counterattack. The company team is in a V formation

using the bounding overwatch technique, but because a heavy fog limits the effectiveness of the BIFV's thermal sights, the bounds between platoons must be shortened to less than 1,000 meters.

With the armor platoon in overwatch, the infantry platoon leader is advancing



his platoon forward to take up an overwatch position on a hill when he suddenly encounters two enemy tanks 800 meters away moving toward his unit. He orders his two Bradleys that are in hull defilade positions behind the hill to engage the enemy tanks with TOWs while he tries to withdraw his and his first squad's IFVs off the exposed side of the hill. Both Bradleys fire their M239-launched grenades and try to suppress the enemy with armor-piercing rounds from their 25mm chain guns. But in less than seven seconds into this small-scale meeting, both Bradleys are hit by rounds from the enemy tanks' main guns.

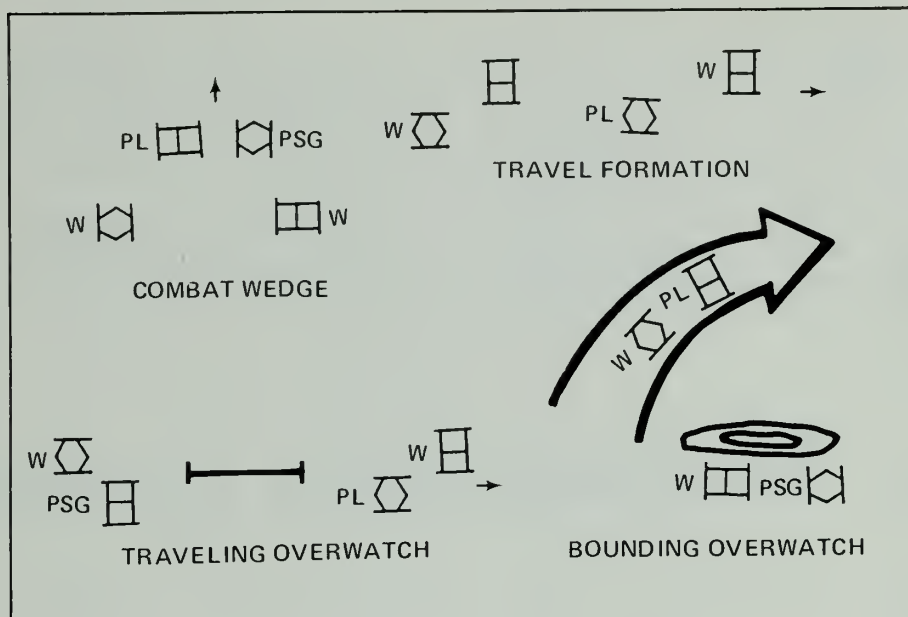
How, then, can company team commanders protect their forces from situations such as this while conducting fire and maneuver with IFVs and M1 tanks on the battlefield? A possible solution is to task organize at platoon level. Mixing two of the three platoons in the company will give the commander more combat power although it may cause some problems as well. (The decision to mix the platoons must be based, of course, on an analysis of mission, enemy, terrain, troops available, and time — or METT-T — with the team commander retaining the flexibility to return to the traditional configuration of three pure platoons when conditions call for it.)

## COMBINATION

As FM 100-5 says, "The appropriate combination of maneuver, firepower, and protection by a skillful leader within a sound operational plan will turn combat potential into combat power."

It may be valuable, therefore, to look at the idea of forming combined arms platoons from the standpoint of these three elements of combat power — maneuver, firepower, and protection — and also from the standpoint of leadership.

Maneuver is described as sustaining the initiative, exploiting success, preserving freedom, and reducing vulnerability. If the leading pure platoon in a company team encounters an enemy threat that requires the assistance of another pure platoon, then the commander must take the time to maneuver that platoon into a position of advantage to overcome the threat.



The time lost in doing this decreases the company team's battlefield mobility and may cause it to lose the initiative. But if the commander is leading with a platoon team, then the enemy force can be effectively engaged at once.

The second element of combat power — firepower — provides the destructive force that is essential for successful maneuver. A platoon team enables the commander to place the respective fires of the IFVs and the tanks on the appropriate enemy targets immediately.

But the main disadvantage of splitting the company team's attached platoon is that in doing so the commander is trading immediate effective firepower for massed firepower. To offset this potential weakness, however, the team commander can position one platoon team directly behind the other so that he can quickly reinforce the lead platoon's firepower if the need should arise.

The third element, protection, is the primary reason for task organizing into platoon teams. Alone, either tanks or IFVs are vulnerable to various types of enemy weapon systems. But fighting side by side these vehicles can provide excellent protection for each other. If the commander decides that his mission can best be accomplished by a platoon team, then his team should be arranged as shown in the accompanying sketch. For protection, the platoon leader's and platoon sergeant's wingmen must be of the opposite branch, as they are in the sketch.

If they are not, then the immediate protection and the gains of maneuver and firepower could be entirely lost.

Leadership, the fourth element, is the key to making the platoon team a workable concept, yet this is also the area in which problems are most likely to occur. It is challenging enough to deploy a pure platoon effectively, much less a platoon that contains men and vehicles from another branch. For this reason, the infantry and armor platoon leaders who are selected to lead platoon teams must be especially proficient at their jobs. Strong, aggressive leadership — coupled with extensive battle drills, field training exercises, and gunnery programs — is required.

## EXCHANGED

To provide the best possible knowledge and experience in using the capabilities of the two types of vehicle, the infantry and armor platoon sergeants, accompanied by their wingmen, must be exchanged. Since the infantry platoon sergeant is normally the commander of the Bradley containing the junior (or weakest) squad leader, then he will lead a dismounted force consisting of two squads instead of one. This gives the infantry platoon sergeant the support of two squad leaders and more firepower on the ground.

Thus, the squad that remains with the  
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infantry platoon leader will be led by the senior (or best) squad leader, and this squad must be maintained at full personnel strength. The armor platoon leader and platoon sergeant will then be in control of the vehicles while the infantry is dismounted. Both the infantry and the armor platoon leaders and sergeants must therefore become thoroughly acquainted

with the attached elements' men, tactics, fire systems capabilities, and maintenance and logistical requirements. To do this, the two platoons obviously must spend a great deal of time training and firing together.

Combining the best of the infantry and armor worlds at platoon level is, at least, one more option a company team com-

mander can consider when looking at the best way to carry out a given mission.

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# Standardize Combat Load

CAPTAIN STEPHEN P. PERKINS

Since early times, the combat load of the infantryman has been a matter of concern to commanders and soldiers alike. Unfortunately, history is replete with examples of commanders loading their soldiers with supplies to meet every contingency.

Before the 1800s this may have been possible, because soldiers were usually picked from society's best physical specimens. During the Napoleonic period, however, the employment of firearms reduced the need for such strength, and the heads of state saw the possibility of even larger armies with better chances of victory. As a result, soldiers of various sizes, normally smaller, ended up carrying excessive loads.

The infantryman learned early, however, that he could not carry every item the upper echelons wanted him to carry. This is especially true of the American "light" infantryman. He has been overburdened because his commanders have wanted him to be not only combat ready but also more comfortable.

But the infantryman has always been willing to accept hardships when he felt it was necessary to conserve energy or to accomplish a mission. As a result, in every conflict in which we have participated, up to and including the 1983 mission in Grenada, our footmobile infantrymen have always discarded the

items they had no immediate or perceived use for.

We have been talking about controlling the soldier's load for a long time. As early as the 1950s, for example, Brigadier General S.L.A. Marshall recognized the need and advocated loading a soldier according to his size, not according to what he wanted to carry. (He saw not only physical attributes but also emotions — especially fear — as limiting factors.)

## STUDIES

Since then, many studies have been conducted on the human anatomy and how it affects military operations. In 1966 the United States Army's Natick Laboratories and the Research Institute of Environmental Medicine concluded that the most economical load for the properly conditioned fighting soldier is 30 percent of his body weight (47 pounds for the average soldier's weight of 156 pounds), and that the maximum load for a marching soldier is 45 percent of his body weight (or 70 pounds for the average soldier).

Although almost everyone agrees that a soldier's load must be lightened, when it comes to deciding what should be left behind, there is an endless variety of opinion and no action.

When elements of the 2d and 3d Battalions of the 325th Airborne Infantry

Regiment conducted a combat air assault onto the Point Salines airfield on the island of Grenada in October 1983, the soldiers in these units were carrying approximately 80 pounds each. This weight, coupled with the initial fear inherent in a combat situation and the different climatic conditions, led to a marked decrease in their combat effectiveness.

In one battalion, each soldier was authorized to carry all the ammunition he could get, although the readiness standing operating procedures (RSOP) dictated that each man have a set amount according to his duty position. (Most platoon members and leaders carried more than one LAW, for example.) In such situations, when the individual soldier is overloaded, he moves more slowly and becomes a better target.

The readiness SOPs of most U.S. divisions call for each soldier to carry the following:

- 210 rounds of 5.56mm ball/tracer ammunition.
- Three days' rations.
- Two one-quart canteens of water.
- One bayonet with scabbard.
- Bundles of clothing.
- As many comfort items as each soldier wants to carry.

Except for the water, all of these amounts are either excessive or are not likely to be used. (A typical RSOP load



ITEM	WEIGHT (Pounds)
<b>UNIFORM</b>	
Belt, trouser	.20
Boots, combat	3.36
Drawers, cotton	.30
Handkerchief	.10
Socks	.30
Uniform, BDU	3.81
Undershirt, OD	.65
Gloves, shells w/inserts	.63
Field jacket w/liner	3.93
Total	13.28
<b>FIGHTING LOAD</b>	
Pistol belt, suspenders, First Aid pouch	1.59
Canteen, 1-qt water w/cup	3.00
Canteen, 1-qt water	1.80
Entrenching tool w/carrier	2.52
Ammunition pouch (2) w/180 rounds	6.21
Bayonet w/scabbard	1.30
Weapon, M16 w/30-round magazine	7.91
Helmet w/cover	3.44
Grenade, hand (2)	2.00
Mask, chemical	2.91
Total	32.68
<b>EXISTENCE LOAD</b>	
Ration, combat, 2 per day (6)	10.50
ALICE w/frame	5.96
Wet-weather suit	1.70
Poncho	1.70
Sleeping shirt	.65
Sweater	.73
Toilet articles w/towels	2.64
Cleaning kit, weapon	.42
CPOG, complete	5.75
Drawers, cotton	.30
Uniform, BDU	3.81
Handkerchief	.10
Socks (2 pairs)	.60
Undershirt (2)	1.30
LAW	5.20
Mine, M21 (2)	36.00
Armor vest	9.30
Surface flare	1.00
Rounds, M60 (100)	3.00
Total	90.66
<b>BED ROLL ANNEX TO EXISTENCE LOAD</b>	
Bag, waterproof	.75
Carrier, sleeping bag	.40
Air mattress	3.50
Shelter half w/poles, pins, ropes	4.45
Sleeping bag w/case	7.50
Total	16.60
<b>WEIGHT TOTALS</b>	
Uniform	13.28
Fighting load	32.68
Existence load	90.66
Bed roll	16.60
Total	153.22

Table 1. Typical RSOP Load.

is detailed in Table 1.)

Additionally, the following items would follow in the A-Bag: Combat boots, waterproof bag, duffle bag, field cap, cotton drawers, 2 handkerchiefs, mess kit, overshoes, scarf, socks, BDU uniform, wool shirt, wool trousers and towel.

In the immediate future, footmobile (light) infantrymen are most likely to be used in restrictive terrain such as cities, forests, and mountains. They will be able to fight and win in those areas only if they prepare for the situation (through knowledge and training) and limit the amount of weight they carry. They will use surprise to compensate for the reduced amount of ammunition, and new clothing and equipment developments will help reduce the weight they do carry to a minimum. (The extended cold/wet clothing system, for example, will provide better protection with less weight and bulk.) They will be resupplied by Army or Air Force aircraft or by motor transport.

Their superiors will certainly have to show a considerable amount of leadership and initiative to make sure their soldiers consume water, perform personal hygiene, protect themselves from cold weather hazards, and carry the proper load to combat.

A recommended list of minimum essential equipment is shown in Table 2. It has its roots in the following order of priority: ammunition, water, food, clothing, mission equipment, and comfort items.

In addition, the supplementary bag would contain the following: Armor vest, bayonet with scabbard, waterproof bag, sleeping bag carrier, air mattress, shelter half (with poles, pins, and rope), sleeping bag with case, duffle bag, field jacket, four MRE rations, poncho, cotton drawers, camouflage uniform, handkerchief, and two undershirts.

This recommended load is based on some restrictive assumptions:

- Current tactics and doctrine will not change significantly.

- REFORGER exercises will continue to require the greatest amount of equipment.

- Operational weather will remain moderate.

ITEM	WEIGHT (Pounds)
<b>UNIFORM</b>	
Belt, trouser	.20
Boot, combat	3.36
Drawers, cotton	.30
Socks	.30
Uniform, camouflage	2.00
Undershirt, OD	.65
Gloves, shells w/liners	.63
Liner, field jacket	.73
Sweater	.73
Total	8.90
<b>FIGHTING LOAD</b>	
Pistol belt, suspenders, First Aid pouch	1.59
Canteen, 1-qt water w/cup	3.00
Canteen, 1-qt water	1.80
Ammunition pouch (2) w/180 rounds	6.21
Weapon w/30-round magazine	7.91
Helmet w/cover	3.44
Grenade, hand (2)	2.00
Mask, chemical	2.97
Total	28.92
<b>EXISTENCE LOAD</b>	
Ration, MRE (2)	2.56
ALICE w/frame	5.96
Wet-weather suit	1.70
Sleeping shirt	.65
Toilet articles	2.64
Cleaning kit, weapons	.42
CPOG, complete	5.75
Socks (2 pairs)	.60
Entrenching tool w/carrier	2.52
LAW	5.20
Cap, field	.26
Total	28.26
<b>WEIGHT TOTALS</b>	
Uniform	8.90
Fighting load	28.92
Existence load	28.26
Total	66.08

Table 2. Recommended Minimum Essential Load.

- Resupply will be available to the troops on the ground.

- The Soviets will remain willing to use nuclear and chemical weapons to ensure success.

The omission of any one of these conditions would drastically change the list of minimum essential equipment.

The uniform items on the list will provide protection from the climate while a unit is on the move. The fighting load contains water, limited NBC protection, and enough ammunition to protect against dismounted infantry attacks or to strike offensively with well-aimed fires.

The existence load contains an adequate amount of food, protection for continued adverse weather, limited hygiene protection, extended NBC protection, and a means of countering armored forces (LAW) and of providing cover from small arms fire (entrenching tool).

The supplementary load provides the items needed in special situations — a sleeping bag for extended periods in one location, for example, and a bayonet for civil disturbance actions. This load can be delivered by air or motor transport when the time, the assets, and the situation call for it.

In short, we must learn to analyze loads

according to actual need on the basis of METT-T, not according to possible need. In addition, equipment should be designed and worn to distribute weight to as many muscle groups as possible and to avoid sensitive areas of the body.

Our commanders at all levels must acknowledge the fact that no matter how much training they do, they cannot change the nature of a man's physical capabilities. They must establish a doctrine on load control, preferably at Department of the Army level, and an absolute weight limit for men in combat. Then leaders at all levels must enforce the load control system through effective

leadership, including a rigid inspection system.

Finally, infantry units must train with realistic loads at all times. Only after these steps are taken can the "light" be put back into infantry.



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# Alpini: Men in High Places

JACK BARHAM

Unless you've been stationed in Southern Europe, you may not be aware that our NATO ally Italy maintains the largest force of mountain troops in the free world. And unless you've had a chance to watch a company of Alpini moving across a mountain snowfield bearing all their weapons and equipment, on all-purpose military skis, and at a pace that leaves the average sport skier with specialized equipment floundering in their wake, you may not know that they are also the *best* mountain troops in the world.

Unless you are pretty familiar with mountain warfare tactics, you probably don't know that Italy is the last of the world's industrialized nations to maintain mule stables in their modern army. Despite many innovations in mountaineering machinery, nobody has found a substitute for getting heavy and medium mortars into places the Alpini like to shoot mortars from, which is to say the peaks of alpine mountains accessible only to mules, mountain goats, and Alpini soldiers. (They also use helicopters and an ingenious tracked, mechanized sled called an "Alpini scooter," but nothing

can move through a cloud over a treacherous mountain trail so well as an Alpini mule.)

Italy borders France, Switzerland, Austria, and Yugoslavia. Any force invading Italy by land would have to pass over mountains. Internally, the land mass of Italy ranges from mountainous to hilly, with very little really flat terrain. So it makes sense for the Italians to maintain a fairly large body of mountain troops, and to make sure that these troops are very good at what they do.

Thus the Italian Army 4th Corps (Alpini), which presently consists of five brigades, is simply a necessary military force, fitted and trained for its mission. It is, in fact, a well fitted and superbly trained military organization.

Each brigade is composed of three or four battalions of mountain infantry, a battalion of mountain artillery, with varying numbers of mountain engineers, signalers, and logisticians.

There is even a battalion of Alpini paratroopers who go looking for drop zones that sane jumpers have nightmares about.

The most impressive demonstration of

mountain warfare skills ever observed by the writer occurred at a couple of renditions of CaSTA. That's the Italian acronym for *Campionati sciistici della Truppe Alpini* or Alpini Ski Championships. Each year the brigades send their best military skiers to a designated location in the Italian Alps to compete in the kind of skiing Alpini do — that is, tactical, cross-country, all-terrain, full load-bearing. Most of the events are squad and platoon level races of varying distance over terrain that would tear a snowmobile apart.

Tactical units (squads and platoons must be honest — no ringers) race against time and each other and fire their weapons against still and moving targets along the way. In some events the unit cannot continue the race until all of its targets have been hit. In others a distance penalty is assessed for every miss. To win a CaSTA event is, in peacetime, the greatest possible achievement for an Alpini squad or platoon leader.

Being able to do that kind of skiing with one's company builds a good measure of *esprit de corps*, but the Alpini professionals build on these activities to



instill in each of their soldiers a tremendous unit loyalty that endures long after his active duty days are past.

They start with a young conscript who has about the same attitude toward military service that young Americans did back in the days when they, too, were being drafted. But the Italian draftee has expected it from the day he became aware that he was a healthy male and that Italy maintained armed forces. He knows he's going to spend a year on active duty. (Or eighteen months if he wants to specialize as a medic, an engineer, or a radio operator, or to accept basic NCO rank.) And he knows that every other young Italian man will spend the same amount of time on active duty. While deferments are easy to acquire, sooner or later everybody serves. Exceptions are almost non-existent.

(The Italian Government does a lot for its armed services in this respect. All able-bodied men serve, but each can choose his time. If he wants to complete college, fine. Get married, sure. Have six kids, his choice. But sooner or later he's going to do his year to 18 months in the armed forces. So the Italian conscript reports to his first duty assignment without the sense of injustice that often plagued the U.S. selective service system.)

He is an Alpino by choice. If he wants to be a tanker or a leg infantryman or a regular paratrooper instead or join the Italian Navy or Air Force, he has those options. If he's a mountain boy though, he almost always picks the Alpini, for that means he'll be stationed close to home. It means he'll spend a lot of time on skis, something he probably already knows something about and likes to do. When his tour of active duty is over, he will take his distinctive Alpini hat and return to his home town, an acknowledged veteran of tough training, and join his father and grandfather in the local chapter of the highly respected Alpini Veterans' Association.

The Alpini private spends his first six to eight weeks of active duty at Aosta, the Alpini equivalent of Fort Benning, where he learns to fire his rifle (NATO 7.62mm FAL), move in the mountains, and accept the stern discipline of the Alpini Corps.



**Alpini in overwhites, moving out for a cross-country march.**

The training is tough. And "realistic" is an understatement. When a 19-year old finds himself hanging from a nylon rope 400 feet above the rocks, and when what's holding that rope is a fellow trainee, mutual respect develops quickly. When his fellow trainee doesn't drop him because their sergeant has shown them how to safely conduct a belay, that respect extends to the NCOs. And when the trainee sees the respect the NCOs give to the officers, he starts to learn something about military discipline. Soon he begins to feel pretty good about being a member of his squad, platoon, and company, even if he doesn't especially like hanging 400 feet over the rocks.

After his basic training, the new Alpino joins his unit. With rare exception he will spend his entire active duty period with the same squad. And although he will serve only a year, almost every day of that year will be filled with intensive unit training. Each soldier gets 10 days of leave during his first year of active duty. The remainder of the time he trains six days a week. His training incorporates everything an Alpino needs to know, from digging snow caves to learning the unit songs. (If he plays an instrument especially well, or has an extraordinary singing voice, he may be accepted into the brigade band or chorus, an option many conscripts prefer to digging snow caves or hanging over rocks. Regardless, every Alpino can sing his unit songs.)

The officers are almost all career men, graduates of the Italian Military Academy and the Alpini Officers' Course at Aosta, where new lieutenants spend six months cruising deep powder and hand-carrying 81mm mortars up mountain peaks. (It teaches the lieutenants to appreciate the mules.) Their mission is to train their men so well that a youth who spends his year on active duty can be recalled years later, should the nation mobilize for war, with most of his mountain skills intact. The training is almost exclusively mountain oriented, and it truly builds men who know what to do in the mountains.

Their equipment is first class. The FAL rifle (usually issued with folding stock) is a little heavy for carrying up a rope, but the Italians like its range and accuracy. Their skis, climbing gear, and other items necessary to mountain survival are the best that can be produced in Italy or purchased elsewhere. Even the uniforms of the private soldiers are of high quality material, well designed and carefully tailored for each man.

The dominant item of the uniform is the hat, alpine style, with a distinctive black feather (white for field grade officers and above). It is the most respected headgear in the Italian armed forces. Each soldier takes the hat with him when he leaves active duty, wears it to meetings of the Alpini Veterans' Association, and honors it for the rest of his life.

The Alpini's proudest days were in



World War I, when they beat the mighty Austro-Hungarian Army, took the Upper Adige (now much of northern Italy), and, at terrible cost, reclaimed Trieste. They make no excuses for backing a loser in World War II, but stress the valor of the Alpini units, which the Germans used to cover their retreats in the mountains of Greece, Russia, and Italy. And they are quick to mention that the Alpini were the first members of the Italian Army to form a volunteer battalion and fight the Ger-

mans alongside U.S. forces in Italy.

Alpini units are deployed throughout northern Italy, with most of the combat units distributed in the northeast. Their active duty strength is under 10,000, but in every city, town, and village in northern Italy are mountain men who have Alpini hats on their mantles and the skills of mountain soldiers in their bodies. They have standing assignments, usually to their old units, and if the need should ever arise, they will be ready, willing, and

very able to swell the Alpini force to a formidable size on short notice.

Skilled, professional, determined, these "men in high places" are indeed a force to be reckoned with.

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# The Fine Art of Delegation

LIEUTENANT COLONEL DENNIS J. GILLEM

Every leader knows how to delegate tasks to subordinates. Well, most of them do, anyway. But there's delegation — and then there's delegation. As an old Engineer sergeant once told me, "I can teach you to drive a bulldozer in about 30 minutes, but it may be a long time before you'll be any good at using it."

The one thing everyone knows about delegation is that you always delegate enough authority to get the job done. Very true, but there is much more to good delegation than providing authority.

When you find yourself in a position where you may want to delegate, there are some key points that you should consider:

- Determine whether the task is "delegatable." Certain things you may be required to do yourself.
- If it is delegatable, determine whether you *should* delegate it. It may be something you need to do or simply want to do personally. Then, again, you may need to delegate because you are overloaded and want to "share the wealth." You may *have* to delegate the task because it is clearly the responsibility of one of your subordinates. You may *want* to delegate simply to show trust in a subordinate. Or you may *need* to delegate all or a portion of a task because

you don't have the information you need to complete it.

- If you decide to delegate it, pick the right person. You do not have a supply clerk assemble the company; neither do you tell a platoon sergeant to type a letter. You must also consider the workload and the abilities of your various subordinates.

- Then make sure the one you have picked to do the task knows exactly what you want him to do. "Take care of this," may produce some interesting results — results that will not fit your need; undoubtedly, you will then provide the required guidance to your subordinate and then "allow" him to do it over again. (There was at least one case in Vietnam where a soldier was told to "take care of" some prisoners. The result was murder; don't let this happen to you.) Also tell him in what format you want your answer. Will a simple, verbal "Up" do it, or do you want a draft message, an operations order, a staff study, or a chart? If you do not tell him, he will not know. It's fine to leave it up to him, but tell him that's what you're doing.

- Set a suspense date. He must know when he has to have it in your hand. (A suspense date is not the date it goes in the mail — it's the day you get it. A

suspense date is the "no-later-than" date; it is okay for it to arrive early.) If you can afford the time, let him set his own suspense date; in any event, be willing to negotiate as he works this new task into his present work schedule. Even if you don't care when it gets done, set a suspense date anyway so you can be sure it does get done.

- Finally, record the action in your suspense system (calendar or suspense file) so that you can clear the item from your conscious memory and concentrate on other things. Your suspense system will remind you at the appropriate time what is due and from whom.

So, do delegate, when it is appropriate. Give it to the right person, and give him the appropriate authority. Know exactly what you want and communicate it clearly. Set and record the suspense date. Then continue on.

Delegation is a very useful and fine art.



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# THE AMBUSH

BRIGADIER GENERAL WAYNE A. DOWNING  
SERGEANT MAJOR GEORGE D. CONRAD



***AUTHOR'S NOTE:** The training techniques discussed in this article were developed over the past 11 years by the U.S. Army's Ranger battalions. These tactics and methods have been used all over the world, from the jungles of Panama and Honduras to the frozen ground of the Tanana River valley in Alaska*

*to the deserts of Egypt, Somalia, and Oman. The authors acknowledge the imagination, hard work, and professionalism of a generation of Army Rangers who developed these proven training approaches.*

Light infantry forces are not just lightly equipped infantry; they are infantry units that fight differently to take advantage of their unique capabilities. Their tactics emphasize techniques such as infiltration, stalking, and surprise, and they use their all-weather and all-terrain capability to the fullest.

Light infantry units can appear at the unexpected time and place on the battlefield and attack from the unexpected direction. They can operate in the enemy's rear areas and against his bases and lines of communication.

One of the basic light infantry operations to be performed in the enemy's safe havens is the ambush. This means that, if you are in a light infantry unit, sooner or later, you may have to either plan or conduct one. Like many other infantrymen — officers and noncommissioned officers — you may have learned the basics of the ambush in Ranger School. And although these basics are an excellent starting point, to dominate on the next battlefield, you and your unit must become proficient at some more advanced techniques.

What is an ambush? As most INFANTRY readers probably know, it is a surprise attack against a moving or temporarily halted enemy force for the purpose of destroying or capturing it and its equipment. An ambush is a very effective and economical means of attacking an enemy, because it allows a smaller force to engage and defeat larger, more heavily equipped formations. The enemy's morale and effectiveness suffer heavily from the effects of an ambush and at little cost to the force executing it.

## TYPES OF AMBUSHES

There are two general types of ambushes — area and point.

Area ambushes are generally established by platoons, companies, or even battalions. They are used to interdict enemy movement in a given area or to inflict heavy casualties on his forces. Area ambushes are composed of a series of point ambushes, the size and location of which are dictated by a METT-T analysis (mission, enemy, terrain, troops available, and time).

A point ambush is set at the best location from which to inflict damage on the enemy. Even though a point ambush is set at a given location on the basis of an assumed direction of enemy approach, it must be able to accept the enemy force from more than one direction. There may be times when a unit can execute an ambush in only two or three principal directions, but the fourth sector must still be covered by security forces to give early warning and prevent an attack from an unexpected direction.

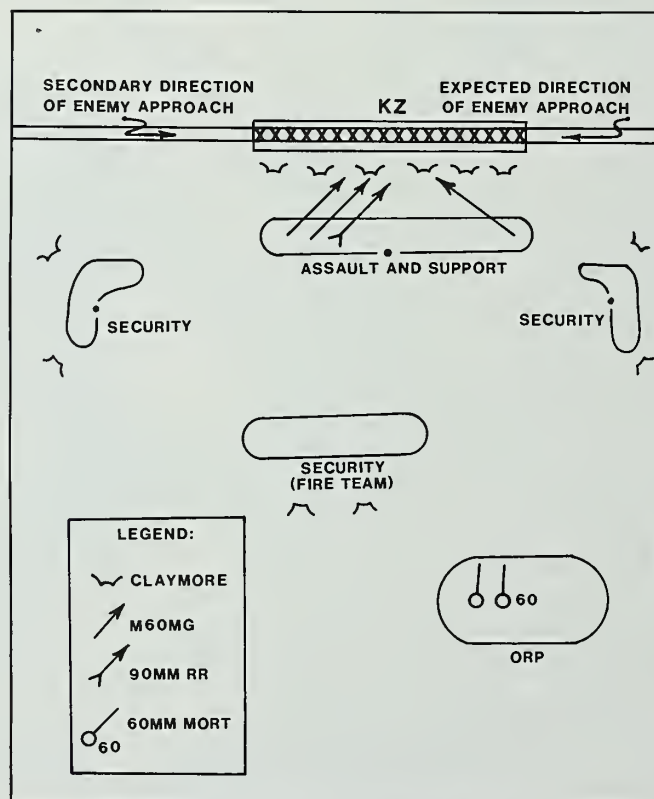
The basic ambush formation is linear, like the one in Figure 1. This ambush can accept contact from three basic directions — left, right, and front. The rear is covered by a security team,

the size of which depends, again, on the METT-T analysis.

The principal variation on the linear ambush is the L-shaped ambush (Figure 2). The L ambush is formed with the base of the L perpendicular to the expected enemy direction of advance. This is a good ambush for a road, a jungle trail, or any other area in which an enemy force is canalized and you can be sure of its approach route. The L ambush can handle an enemy approaching from the expected direction (toward the base of the L) from the front (the stem of the L) and, although less effective, can also be used against an enemy formation that comes from the opposite direction. In this case, the ambush must be executed when the enemy main body has cleared the base of the L, and the flank security must protect the rear of the L's base. All weapons must be carefully sited to avoid direct or ricochet fire into the ambushing forces.

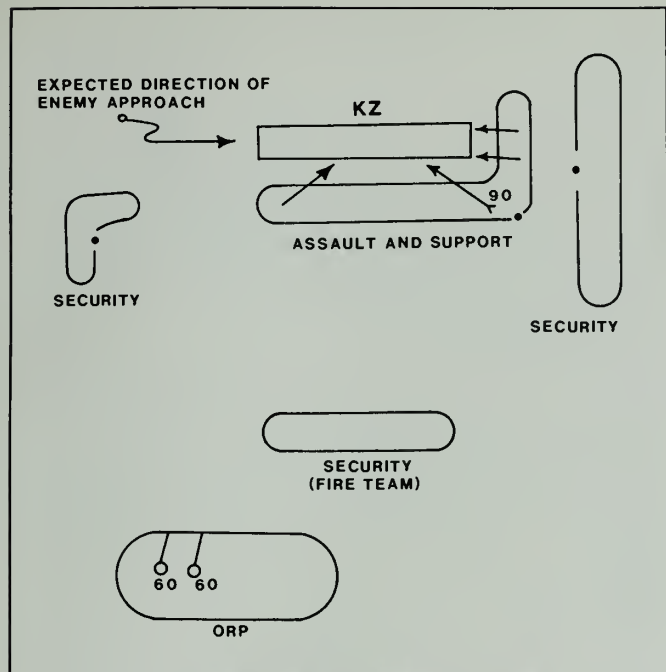
All the other ambushes you hear about — the Z, the X, the V — are variations on the basic linear and L formations (Figure 3). (WARNING: These more advanced ambush formations are extremely tricky and intricate. You must be an expert in the basics before you can employ them.)

One other type of point ambush is worthy of mention — the mechanical ambush. This ambush consists of claymore mines set in series with a double ring main; it is command detonated or is detonated by a triggering device activated by



**Figure 1. Platoon Linear Ambush.**





**Figure 2. Platoon L-shaped Ambush.**

the enemy (Figure 4). As a rule, a mechanical ambush should be manned. All the soldiers in it must be prepared to engage the enemy with organic weapons if the mines do not detonate or if they are not entirely effective. (See also INFANTRY, May-June 1970, pages 53-54.)

Mechanical ambushes are an especially good way of interdicting a large area with a small light infantry force. If a mechanical ambush is effective and the troops do not reveal their presence, the enemy will have no idea what hit him — it could be fire from artillery, mortars, or even aircraft. This uncertainty will have a devastating effect on his morale and effectiveness.

## METT-T

If your unit is tasked with setting up an ambush, you must first evaluate it in accordance with METT-T:

**Mission.** From the outset, understand exactly what the ambush is supposed to do. If your commander issues you a Commander's Intent (and he should), study it carefully to determine what is required. Then fit this into your own Commander's Intent when you issue your order. Be able to state the mission explicitly; for example, it may be to interdict enemy resupply efforts, ambush enemy armor columns, or capture enemy personnel or specified pieces of equipment. Each of these missions is distinctly different and each will have to be planned, organized, equipped, rehearsed, and executed differently.

**Enemy.** What type of unit is to be attacked? Is it guerrillas, main force troops, supply parties, armor units, or other conventional forces? Consider such things as the size of the enemy force, the enemy's habits when attacked, supporting units, his night vision capability, and his expected time of movement. Also consider what bait he is likely to react to — raid a small site and ambush the relief force, for example.

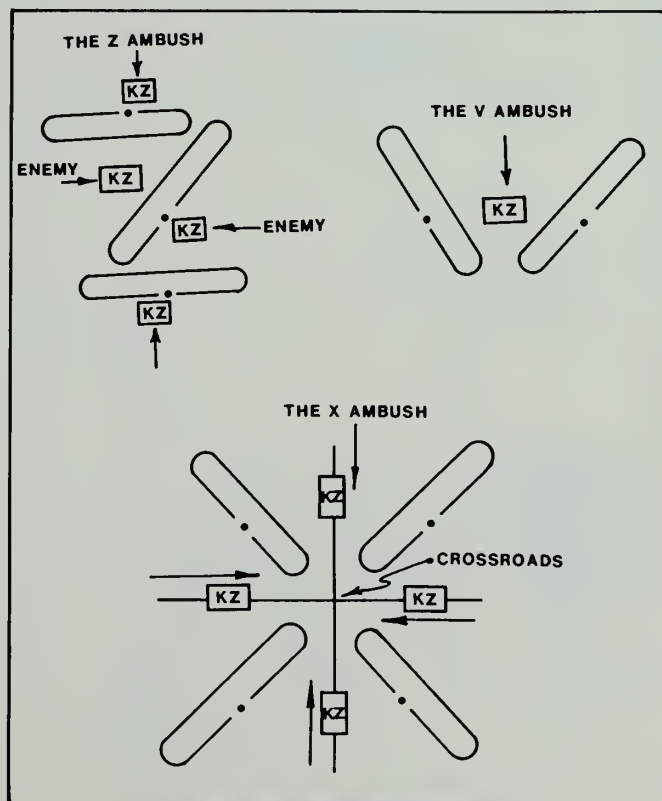
**Terrain.** Is it wooded, mountain, jungle, or urban? (Yes,

you can set some formidable ambushes in a city or suburb.) What routes are both available to the enemy and appropriate to his activity?

**Troops available.** How big is your force? In low-intensity conflicts, squads and platoons are our basic ambush forces. In mid- to high-intensity conflicts, company-sized ambushes may be the norm. An ambushing force should be able to successfully engage a force two or three times its size — but this depends on the enemy and the terrain. For example, a platoon ambushing an enemy tank company in daylight in open terrain is taking a big risk, but a light infantry platoon engaging that same column at night or in a forest may well have a decided advantage.

Organize your ambush forces according to your TOE — by platoons, squads, and fire teams. Do *not* chop up these units to create assault elements, security elements, and support elements. Instead, give your TOE formations these missions with some augmentation. Give a squad the assault mission, for example, and augment it with a fire team; or give a squad the support mission, and augment it with a 90mm recoilless rifle section, an M60 machinegun team, and a 60mm mortar section.

**Time.** How long will it take to emplace the ambush? A complex, lethal ambush with plenty of "dirty tricks" will take hours to set up, a hasty ambush on a trail, 15 to 30 minutes. How long is the ambush to be in place? What hours of the day? Or will it be at night only? How soon must it be set up? Remember, it's not a good idea to set up an ambush in darkness — even if it is to be executed in darkness. It's an even worse idea to set one up in darkness to be executed in daylight. Try to allow every soldier to "see" and lay in his weapon in daylight. Time is important.



**Figure 3. Ambush Variations.**

Once you have completed your METT-T analysis and decided on the type of ambush you want to use, you have to look at ways to make it as effective as possible.

First, plan well for security. Since any ambush is a surprise attack on the enemy, security measures are always a fundamental consideration.

As a general rule, don't walk on a road or trail that you intend to ambush, and don't walk in the kill zone. Against a professional, alert enemy, such actions will give your ambush away, and you will be the one to be attacked.

The position's camouflage must be perfect. One leaf turned the wrong way can give away an otherwise perfect set-up. Remember, 360-degree camouflage is necessary in case the enemy approaches from that unexpected direction.

Discipline in the ambush site must be ironclad. Do not allow sleeping, talking, eating, or smoking. If an ambush is to be established for long periods, the elements of the ambush must be pulled back periodically to the objective rally point (ORP) or rally point (RP) for rest. Extended ambushes of 24, 36, or 48 hours require six- or eight-hour shifts around the clock. In these cases, it may take a company to man an extended platoon ambush position.

Don't expect tired troops to man an effective ambush. You can't conduct vigorous patrolling operations all day and then expect your soldiers to be totally alert all night. And one snore or a snort as a sleeping man is awakened is enough to warn an enemy.

Planning for security elements is critical. The element that detects an approaching enemy force must be able to warn the leader when the main body appears, and tell him the size of the enemy's security element and the time most of the enemy troops have passed his position. Security elements must also protect the flanks of the ambush so they won't be rolled up by enemy security or follow-on forces. Remember that an ambush force is vulnerable once it has executed the ambush, because its total attention is focused on the kill zone. The im-

portance of the security element in this instance cannot be overstressed.

The leaders in the ambush must have contact with all members of their unit in order to alert them to the enemy approach, but they cannot afford to walk around the ambush site during this critical period. The best method of alerting the soldiers in the ambush is to have strings or vines tied to their legs or arms. A series of tugs on these lines can then be used to alert everyone.

Another security measure is the selection of a good route of withdrawal. Don't forget it as you plan your ambush site. In fact, the best possibility for an ambush position may have to be rejected because it does not allow a good secure way out for the ambushing force. Again, apply METT-T, since the enemy will take immediate evasive action once he is engaged.

## EXECUTION

As for execution, the leader at the site must execute the ambush using a device that will cause casualties. For example, a bank of claymores on a double ring main is an excellent device with which to spring an ambush. Another good technique is to use a machinegun or a 90mm recoilless rifle firing antipersonnel rounds. All must be under the leader's direct control. Don't plan to use whistles or pyrotechnics; they give the enemy time to react.

As soon as the enemy unit is hit, the soldiers in the ambush force will have only a second or two in which to kill those enemy soldiers in the kill zone. Then they are going to recover from their initial shock and react — either by directly attacking the ambush or by getting out as fast as they can. So plan your subsequent fires and other banks of claymores accordingly.

The only time the leader of the ambush force does not execute it is when another member of the ambush knows that he has been discovered. Then that soldier has the authority to execute — but he must do so with killing fire, not by yelling.

All weapons in the ambush must be sited with interdicting fires in the kill zone and along likely avenues into and out of the ambush site. The weapons should include M203s and mortars if the terrain permits. Machineguns should always be used with tripods and traverse and elevation mechanisms to lock in fires. All riflemen must use firing stakes with left and right limits and also elevation stakes. (Don't forget the tendency of soldiers in an ambush position to shoot high — especially at night.) M203s should be sited to cover deadspace and routes of escape.

Just as the leader controls the execution, so he must also control the cease-fire, using a whistle or a similar device to get his soldiers' attention. Again, he should not use pyrotechnics. Often they either don't work, are not visible to everyone, or cause confusion.

You must also decide how and when search teams are to be used. (They are not automatic.) Remember, when the soldiers leave the security of their well-chosen, concealed ambush positions, they are subject to the fires of the enemy who may also now be hidden and ready. Be careful. If it is at night,

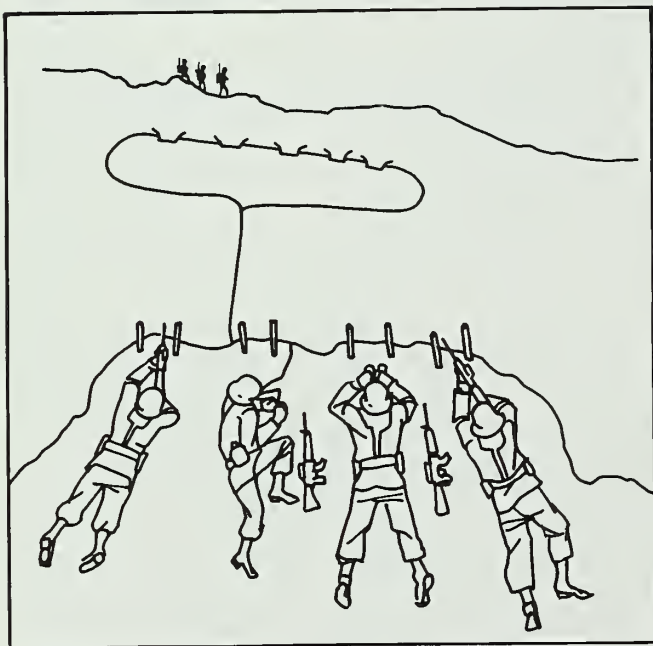
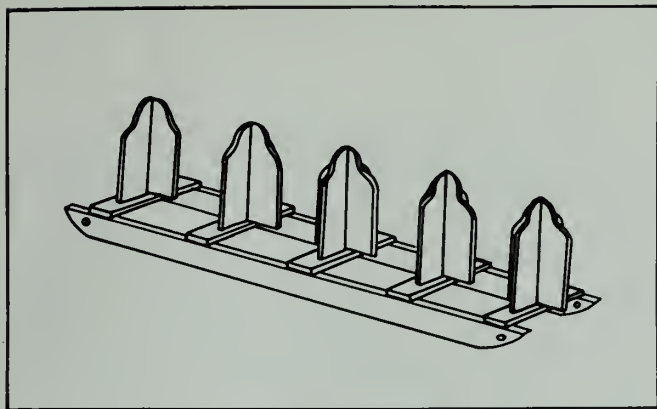


Figure 4. Mechanical Ambush.





**Figure 5. Target Sled.**

don't throw trip flares or shoot 60mm or 40mm illumination to light the search areas: Your soldiers will be the ones who are illuminated to a hidden enemy. (And always assume there will be hidden enemy — you will not get them all.) Your soldiers, working as buddy teams, can use narrow-beam white flashlights taped to their M16s to rapidly search an area. If the enemy's return fire is heavy, or if the ambush has missed the enemy's main body of troops, then the leader may appropriately choose to break contact and leave the area.

Breaking contact from an ambush site is tricky business. Security elements must guard the flanks, and it is a good idea to set a series of hasty ambushes covering the withdrawal of the main body from the ambush site and from the ORP. Contingency plans for breaking contact with the enemy must be addressed in the operations order or covered in the unit's SOP.

## SMALL POINTS

There are several other small points to remember in planning an ambush:

- Be innovative. Give your imagination and creativity full range as you develop your ambush techniques.
- Put yourself in the position of your enemy. If your ambush is successful and you get him in the kill zone, the results will be physically and psychologically devastating to him. When he is first engaged by your claymores, recoilless rifles, and machineguns, he will be stunned for at least a second; then he will respond — usually by recoiling from your fires and fleeing the area. Plan on this as you set your ambush.

If he runs, it will be along natural lines of drift away from the ambush site — generally downhill. Put banks of claymores down these routes, and put fire teams and squads along these routes to cut him off and engage him. Place well camouflaged punji stakes in areas where he might go to ground to escape your fires. (Note: When you emplace these casualty-producing devices, remember the earlier warning about walking in the kill zone or across the enemy's suspected route of travel. If you must do this to emplace the devices, do it carefully and cover your marks.)

- Leave your rucksacks in the ORP — if you plan to go out that way — or take them with you. But if you take them with you to the ambush site, that's just one more thing to be camouflaged and to hamper movement in the ambush area.

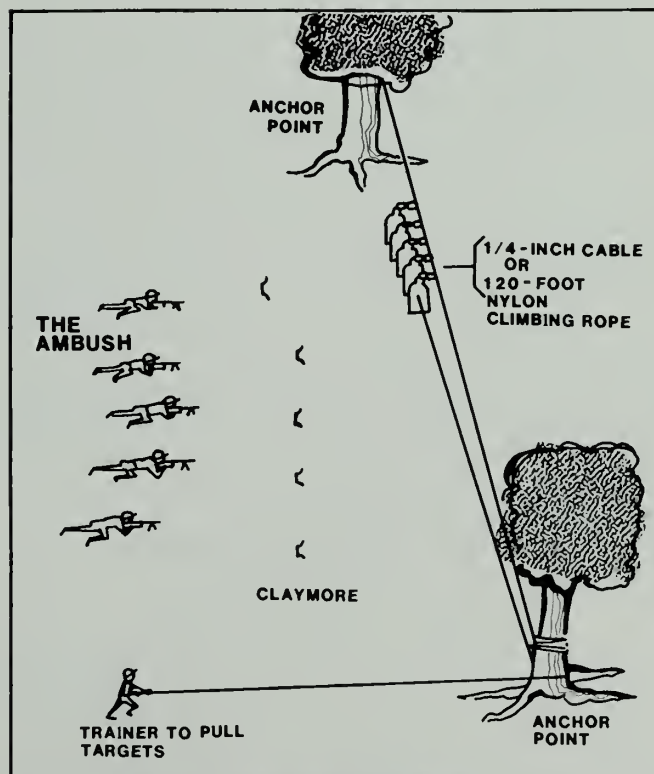
Extensive training in ambush techniques — including live fire training — is absolutely necessary. (Revised editions of FCs 7-14 and 7-15, ARTEP Mission Training Plans, will contain expanded tasks, conditions, and standards for conducting realistic training, to include live fire.)

As in all training in combat techniques, the training must be progressive. Ambush training is characterized by detailed mission analysis and planning, exhaustive rehearsals, dry fire exercises progressing to blank fire then to a MILES-assisted evaluation of progress, and culminating in live fire exercises. Put your unit through this cycle first during the day, then during periods of reduced visibility, and finally in all types of terrain and weather.

It is absolutely essential that you have realistic targets for your soldiers to engage during the live fire portion of their training. Two techniques that have proved effective are the target sled and the suspended silhouette device. (Don't forget to make sure your targets will work before beginning a training event. In fact, in most cases, the ambush training site should be selected on the basis of the suitability of the terrain for the moving target simulators.)

The target sled is a simple device that requires a prime mover of some type — a jeep, Gamma Goat, or CUCV — to pull the targets through the kill zone. The targets can be either E-type personnel targets or threat vehicle silhouettes, or both, attached to a sheet metal sled (Figure 5).

Trees and tree stumps can be used to change direction and to offset and protect the prime move. A 120-foot nylon climbing rope is used to connect the sled to the prime mover. A series of these sleds can be linked to simulate larger forces to be ambushed. Also, local property disposal yards are a source of salvage vehicles for anti-vehicle ambushes.



**Figure 6. Suspended Silhouettes.**

The suspended silhouette training device (see Figure 6) is also simple but quite effective, especially for small ambushes in close terrain. The distance spanned by a taut quarter-inch steel cable is the limiting factor on the width of the kill zone — usually 30 to 50 meters.

A vehicle can be used to cautiously eliminate the slack in the cable during set-up. Manikins, home-made dummies, or E-type silhouettes are attached to the cable by snaplinks. On command, the linked targets are pulled down the cable with a guide rope by a trainer in a concealed, well-protected position outside the kill zone.

It adds a little realism to ambush training if the dummies are dressed in uniforms, and if some with intelligence information are hidden for the search teams to find during their sweep of the kill zone. Foreign language chatter from a tape recorder as the enemy approaches the ambush site adds to the suspense and challenges the nerves of the ambushing force — even in training.

Tactical exercises without troops (TEWTs) are another effective method of training leaders on the basics of selecting sites and emplacing weapons. TEWTs can be conducted while

the troops train on their specialized techniques. The active leadership and participation of battalion and company commanders is essential to teaching these fundamentals.

But reading and talking about ambushes will not make a light infantryman an expert ambusher. The only way to achieve proficiency in planning and executing an ambush is to get out and do it! There will be mistakes in the beginning, but conduct good after-action reviews to learn from both your failures and your successes. Only by learning from experience can leaders and soldiers alike make progress.

While you're conducting your ambush training, concentrate on some of the fine points discussed here, and you will become proficient. We guarantee it.

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**Brigadier General Wayne A. Downing** has served five and one-half years in Army Ranger units, including command of the 2d Battalion, 75th Infantry and of the 75th Infantry Regiment. He is now Deputy Commander of the 1st Special Operations Command at Fort Bragg.

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**Command Sergeant Major George D. Conrad** has served with light infantry units in Vietnam, Panama, and Grenada. He has more than 10 years of service in Ranger battalions as squad leader, platoon sergeant, and company First Sergeant. He is now assigned to the 172d Infantry Brigade in Alaska.

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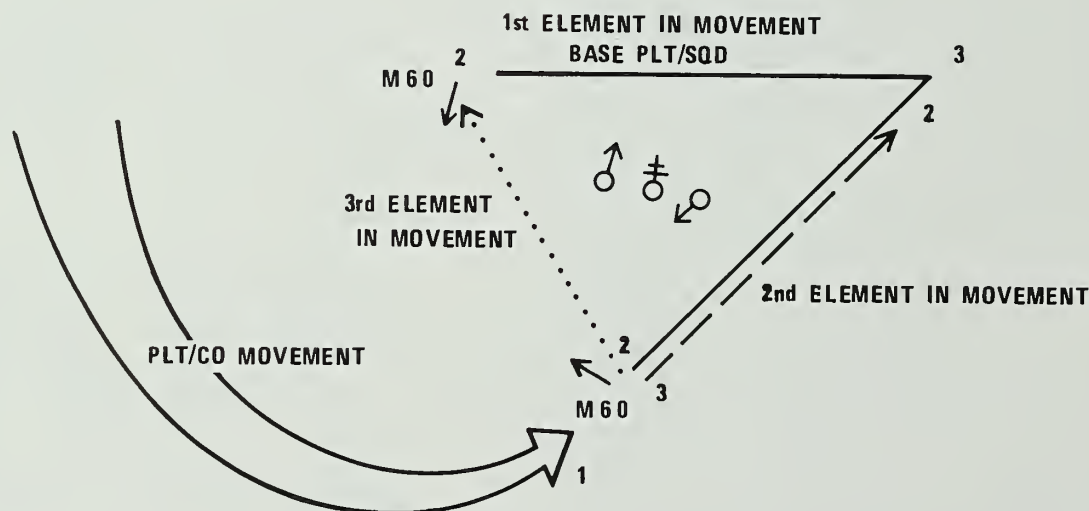
## SWAP SHOP



A platoon or company triangle can be used for establishing ORPs or patrol bases, or for temporary halts during movement. It is quick and easy to move into; it provides 360-degree security; it can be used in most terrain; and it cuts down on the movement associated with occupying patrol bases. Chemical lights or the infrared on the AN/PVS-5s can be used to mark the corners of the triangle.

First, the leader halts the patrol short of the tentative patrol base

location. The platoon leader then conducts his reconnaissance, taking several security men with him. Once the security team members are in position, the remaining members of the patrol move forward and pass through the lead security team. Once all the elements have moved into their rough positions, the patrol members seek cover and concealment in the surrounding vegetation. The patrol leader then dispatches soldiers for reconnaissance and security patrols and listening and observation posts.



(Contributed by Captain Timothy L. Canty, Company B, 1st Battalion, 32d Infantry, Fort Ord.)



# Infantry In Action



## SUSTAINABILITY

CAPTAIN CHRISTOPHER S. BARNTHOUSE

“For want of a nail,” begins the old saying we all learned in our youth, reminding us that even the smallest detail can have a devastating effect on the outcome of historical events. Unfortunately, few military men ever ponder its meaning. Military staff colleges throughout the world teach maneuver and tactics, and generals scratch worried brows, trying to increase the “tooth to tail ratio” of the modern fighting force while giving little thought to how the teeth are to sustain themselves.

How little we seem to have learned from history concerning the role logistics plays on the battlefield. From its first recording, history has been filled with heroic tales of brilliant leaders maneuvering brave armies across the globe, altering borders and history; yet, reading between the lines, one is struck by how often the better logistician has won the battle.

The history of the U.S. Army has been filled with stories of logistical privation and the efforts of our military leaders to overcome it. Yet even today, when tactical operations are being planned, logistical support for the soldier in the field is often treated as a necessary evil. Too often, commanders seem to rely on a combination of Divine Providence and an unsupervised staff to keep their forces supplied, giving little personal attention to the matter. A wise commander plans not only his maneuver, but how he will sustain that maneuver throughout the battle and the campaign. It is an *unwise* commander who plans only his maneuver.

Several examples from the past half century will illustrate the wise and the unwise.

### GERMANY

On 24 April 1945, Company B, 1st Battalion, 14th Infantry, commanded by Captain Lloyd W. Engelland, was involved in a movement to contact as part of a regimental pursuit south

of Nurnberg, Germany. The company’s mission was to cover the right flank of the battalion as it moved from its assembly area in Berlingenfeld to objectives along the Danube River east of Regensburg, 10 miles distant.

The terrain over which it was to travel was hilly and wooded, with only one road usable for supply between its line of departure and the objective. The enemy situation was vague, although intelligence sources indicated that only scattered sniper resistance would be encountered along the route of advance, with probably no more than 40 enemy troops in the entire area between Berlingenfeld and Regensburg. The friendly supply situation was uncertain, with the logistical support elements having a great deal of difficulty keeping pace with the rapid advance of the combat elements.

Company B had three rifle platoons and a weapons platoon with light machineguns and 60mm mortars. Tank support was promised, but could not be relied upon — the tank platoon that had been assigned to the battalion for this operation would not be able to advance until fuel and other maintenance items could catch up with it.

Because resupply during the operation would be uncertain at best, the company commander ordered three days’ rations and extra ammunition issued to each man. He also loaded his two organic vehicles with as much additional ammunition as he could get, especially 60mm mortar ammunition.

Within 45 minutes after jumping off at 0830, Company B was in a firefight with an estimated platoon-sized unit. Similar encounters by other units in the battalion indicated that the enemy’s strength was far greater than estimated.

By noon, Company B had been involved in two more sharp engagements, expending ammunition and taking casualties. The company soon found itself outside the village of Pohnholtz faced by an estimated 25 to 30 enemy engineer troops equipped with an 88mm antitank gun. Confronted with this amount of determined resistance, Captain Engelland requested more sup-

port and was promised some tanks that were on their way up from Berlengenfeld (see map).

At 1230, three tanks arrived at Ponholtz and were ordered to advance. The first one to advance beyond the village was immediately engaged by the 88mm gun and had a tread blown off. The other two tanks then reported that they could not advance in support of the lead tank because one had magneto trouble and the other was nearly out of fuel. Both, in fact, were nearly out of fuel. Even though the logistical support the tank platoon had been waiting for had never arrived, it had been committed to battle anyway. Captain Engelland had no choice but to leave the tanks behind and press the attack without them.

Throughout the rest of 24 April and for the next two days, Company B continued its advance against scattered enemy resistance. During their advance, the soldiers fought four engagements, captured five villages, and forced a crossing of the Danube before going into a defensive position during the night of 26 April. They had been opposed in their advance by an estimated 100 Germans, of which they killed 14 and captured 50. Although the engagements were sharp and Company B relied upon direct fire suppression and the indirect fires of the company mortars to overwhelm the enemy defenders, at no time during the operation was the company resupplied.

## Discussion

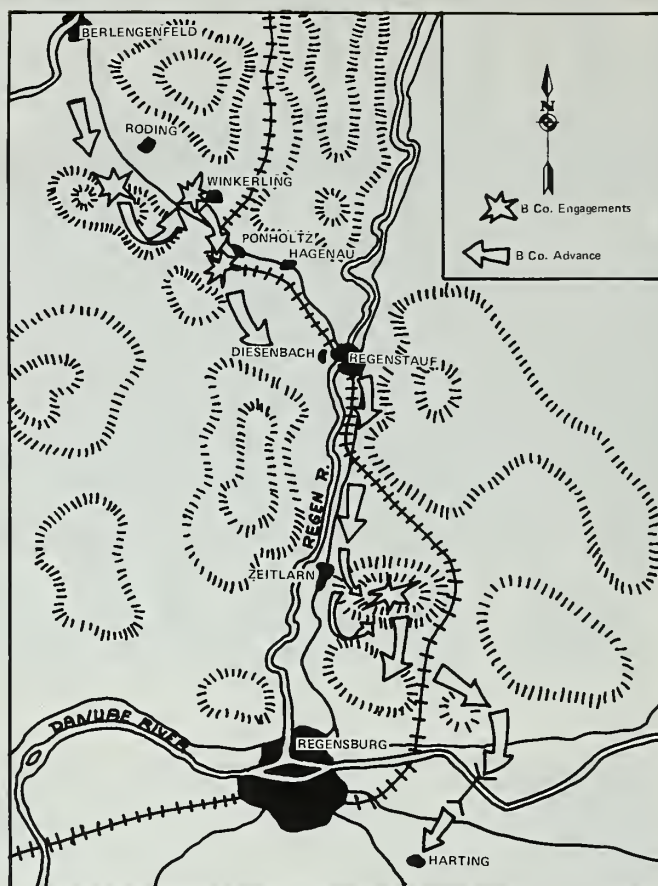
Even though Company B was told that enemy resistance between Berlengenfeld and Regensburg would be spotty, Captain Engelland made sure his company was prepared for the worst. Because the company had stockpiled enough food and ammunition to fight for three days without resupply, when it faced enemy forces delaying in much greater strength and with much greater tenacity than anticipated, Company B was able to press the attack without let-up. Because it had additional rations and ammunition, when the supply situation turned out to be as bad as had been feared, the company was able to operate with the supplies it was already carrying.

In sharp contrast to the infantrymen of Company B was the tank platoon that was sent forward to help them reduce the strongly held German position. Although the tank platoon had been instructed to remain in the rear until resupplied, once the battalion found itself in heavy contact, the tanks were committed without regard to their condition. The end result was that one tank was severely damaged and the other two withdrawn without affecting the enemy.

## NORMANDY

In the late afternoon of 5 June 1944, Private Donald R. Burgett of the 101st Airborne Division was getting ready for the airborne role in the invasion of Normandy. He later reported that the equipment he carried on the jump consisted of the following:

*One suit of O.D.s worn under my jumpsuit — this was an order for everyone — helmet, boots, gloves, main chute,*



*reserve chute, Mae West, rifle, .45 caliber automatic pistol, trench knife, jump knife, hunting knife, machete, one cartridge belt, two bandoliers, two cans of machinegun ammunition totaling 676 rounds of .30 caliber ammo, 66 rounds of .45 caliber ammo, one Hawkins mine capable of blowing the track off a tank, four blocks of TNT, one entrenching tool with two blasting caps taped on the outside of the steel part, three first-aid kits, two morphine needles, one gas mask, a canteen of water, three days' supply of K rations, two days' supply of D rations (hard tropical chocolate bars), six fragmentation grenades, one Gammon grenade, one orange smoke and one red smoke grenade, one orange panel, one blanket, one raincoat, one change of socks and underwear, two cartons of cigarettes, and a few other odds and ends.*

Private Burgett said his load was so heavy that when he tried to stand up, "I found it impossible to even get to my knees...two men lifted me bodily, and with much boosting and grunting shoved me up into the plane where I pulled myself along the floor and, with the aid of the crew chief, got into a bucket seat."

A few hours after Burgett and his fellow paratroopers jumped into the inky blackness of the early morning sky, Company E, 16th Infantry Regiment, assaulted Omaha Beach. In the assault, each man carried a load similar to that described by Burgett, including three days' rations and four cartons of cigarettes. As soon as the men of Company E left their landing craft, they waded ashore, where they paused at the water's edge to get organized and orient themselves for the assault across the beach.

Enemy fire raked the area, and the company's leaders,



realizing that they were in a death trap, ordered their men forward. When the soldiers tried to move, however, they found that sheer exhaustion, rather than enemy fire, prevented anything other than a slow advance. Several noncommissioned officers reported later that after they had advanced only a few steps they had been forced to stop because their legs would no longer support them. It took the company an hour to cross 250 yards of beach.

Not far from where Company E landed, Company M of the 116th Infantry Regiment went ashore. These men were similarly weighted down but managed to make the beach crossing in about 10 minutes. Private First Class Hugo de Santis said of the experience, "We all knew we were carrying too much weight. It was pinning us down when the situation called for us to bound forward. The equipment had some of us whipped before we started. We would have either dropped it at the edge of the beach or remained there with it, if we had not been vigorously led."

Sergeant Bruce Heisley concurred, "I was carrying part of a machinegun. Normally, I could run with it. I wanted to do so now but I found I couldn't even walk with it. I could barely lift it. So I crawled across the sand dragging it with me. I felt ashamed of my own weakness. But on looking around, I saw the others crawling and dragging the weights which they normally carried."

Staff Sergeant Thomas B. Turner said, "We were all surprised to find that we had suddenly gone weak, and we were surprised to discover how much fire men can move through without getting hit. Under fire we learned what we had never been told, that fear and fatigue are about the same in their effect on an advance."

### Discussion

All the units that participated in the invasion of Normandy in June 1944 experienced severe problems because the individual soldiers were overloaded. The paratroopers could not stand up and when actually aboard the aircraft, knelt on the floor so they could rest their heavy loads on their seats. Many reports following the landing indicated that the airborne units were able to regain their maneuverability once they got on the ground, but only because most of the soldiers had abandoned their heavy equipment.

The regular infantry soldiers who went across the beaches were similarly burdened in spite of the fact that the Normandy invasion included the greatest logistical effort in the history of mankind. Although resupply of the airborne elements would be problematic, the resupply of the infantry units was, in fact, offshore waiting to be unloaded even as the first wave of troops was hitting the beach. These supplies were in stockpiles on the beach by nightfall.

In addition to the stress of carrying the excessive loads through heavy surf and onto the beach, fear itself caused the soldiers to become weak, further reducing their ability to carry the weight of their equipment.

Thus it is apparent that when a decision is made to carry additional equipment into combat, leaders must understand the

unique leadership problems that will be generated when the men carrying that equipment come under fire and subsequently suffer from the reduced stamina that fear induces.

Most notable is a comparison between the performances of Company E, 16th Infantry, which took one hour to cross 250 yards of beach and incurred 105 casualties during the day, only one of which occurred after the company got off the beach, and Company M, 116th Infantry, which managed to push across the beach in 10 minutes to achieve the greatest advance of any unit that landed at Omaha Beach on D-Day.

### BREST

From 9 September through 14 September 1944, Company F, 2d Battalion, 23d Infantry Regiment, commanded by Captain George H. Duckworth, fought its way through St. Marc, a suburb of Brest, France, and then through the center of the French port city against heavy opposition. The company had never been involved in fighting in a major built-up area and was largely unprepared, tactically or technically, for that type of combat.

By late afternoon on 9 September, in St. Marc, the company had advanced 1,200 yards; it had been meeting platoon-strength pockets of resistance throughout the day, had taken casualties, and had expended large quantities of ammunition. At 1700, Captain Duckworth called a halt and put his company into a hasty defensive position in a three-block area of the village.

He then ordered his supply sergeant to bring up a jeep that was kept immediately behind the company. It had in its trailer additional ammunition and wire communication equipment, some of it captured German gear. (Captain Duckworth said of this system, "This was not TOE, but it was necessary for the maintenance of good communication within the company.") The ammunition was immediately distributed and the wire communication laid.

While the ammunition was being distributed, the company mess sergeant brought forward a hot meal. It was Captain Duckworth's policy, wherever possible, to serve a hot meal soon after the company had stopped for the night. The food was brought to a central point within the company and was taken forward by porters provided by the platoons.

As soon as the ammunition had been distributed, the supply sergeant and the company executive officer went back to the regimental trains to get more. By company SOP, a jeep trailer full of ammunition was to be in reserve at all times.

During the next four days, in Brest proper, the company found that its radios did not work in the buildings and that it had to use field wire for its communications. This took large quantities of wire, all of which had to be brought up over terrain and in an environment not conducive to resupply. The company also discovered that fighting in a city led to greater than usual expenditures of ammunition and to a high casualty rate.

To add to its problems, the company discovered that its normal method of resupply, that of bringing materials forward in a quarter-ton trailer, could not be used. According to Cap-



tain Duckworth, "It was sudden death to step into the streets, as we soon learned...the only way the streets could be crossed was by throwing a smoke grenade and dashing quickly from one covered position to another." This was hardly the sort of environment in which a jeep could be expected to survive for very long.

After two days of heavy fighting with notable lack of success, Company F developed the tactic of breaching holes in buildings with demolition charges and using those breaches as supply routes. The sustainment of the company remained a risky matter for service support personnel. On the afternoon of 12 September, for example, "an aidman...was killed by an enemy bullet which pierced the red cross on his helmet."

To prevent additional casualties among service support personnel, the unit decided to resupply itself, as much as possible, during hours of limited visibility. A plan was then made and implemented whereby ammunition and food would be brought up along the routes blasted through the buildings and stockpiled at the forward positions in such quantities that the attack could be continued throughout the next day without additional resupply.

According to Captain Duckworth, this was no small accomplishment. "In the darkness," he later reported, "it was difficult to get food and ammunition to the two forward platoons, as many doorways, passages, and holes had to be traversed before reaching their positions. Parties from the company headquarters and the support platoon worked far into the night carrying the necessary supplies." Because the support platoon and parties from the company headquarters brought the ammunition forward, no porters had to be taken from the infantry platoons. This allowed the infantrymen to sleep during the night and to wake up in the morning rested, resupplied, and ready to carry the fight to the enemy.

### Discussion

Although the type of combat the company encountered in Brest was new to its soldiers, Captain Duckworth and his subordinates were able to modify their previous SOPs to meet the new requirements. By trial and error, they learned that the best way to advance in a city was by using demolitions to breach holes in walls, thereby avoiding the murderous fire in the streets. In this process, however, the company's leaders did not lose sight of the fact that somehow the company would have to sustain itself.

Thus, they produced and implemented a plan by which they projected the amount of ammunition the platoons would expend during each 24-hour period and moved that amount forward during each night. They used the routes cleared and held open by the infantry, and used service support and headquarters personnel to get the supplies forward. In this way, they were able to get needed supplies up in a timely manner while reducing the exposure time of the support personnel to enemy fires and allowing the infantrymen to get as much rest as possible. The key to the company's sustainment during this operation was the ability of the commander and his subordinates to meet new supply problems and to produce a plan for overcoming them.



### GRENADA

On the morning of 25 October 1983, Company A, 2d Battalion, 325th Infantry, conducted a combat air assault at the Point Salines airfield on the island of Grenada during the assault phase of the United States' intervention there. Because the unit had initially expected to jump in, each soldier carried the following items — one M16 rifle with bayonet, one M17 chemical-biological protective mask, one rucksack (medium) with frame, individual load-bearing equipment with two one-quart canteens and one two-quart canteen, seven 30-round magazines, one poncho with liner, three C-ration meals, 210 rounds 5.56mm ball ammunition, and one light antiarmor weapon. In addition, each machinegun crew carried 2,000 rounds of 7.62mm linked ammunition, each grenadier carried 36 rounds of 40mm ammunition, and the company carried six Dragon rounds. (No mines or grenades were carried.) Company commander Captain Charles Jacoby estimated that each rucksack weighed in excess of 65 pounds. A resupply was expected within 24 hours after landing.

In the initial phase of the operation, resupply proved to be no problem to the company. The First Sergeant, the company supply sergeant, and the company NBC NCO handled the supply efforts on Grenada itself. The company executive officer (who had stayed behind because he had broken his leg on a training jump) and the company supply clerk pushed the



needed items forward from the base of operations at Fort Bragg, North Carolina.

Ammunition began arriving at the airhead shortly after the initial assault and, because the secured area was small, resupply was easy: Ammunition-bearing parties from each platoon were placed under the First Sergeant and used to ferry ammunition forward. Although there was initially a shortage of fragmentation grenades, a stock of Soviet hand grenades that had been captured made up the shortage.

On 26 October, Company A got its first resupply. Among the items airlifted in from Fort Bragg was the much-needed Gamma Goat that the company XO had somehow managed to get loaded onto an aircraft and sent into the airhead. (How this was accomplished, Captain Jacoby did not know, as his was the only company to receive its Gamma Goat during the incursion.) This vehicle played a critical role in company resupply operations. By SOP, it was kept in the company combat trains, which for this operation was located with the battalion combat trains. There, it was kept loaded with "push packages" of ammunition and other critical supplies so that it could be sent forward at a moment's notice. By the time Company A was withdrawn from Grenada, its combat trains had been expanded by two jeeps with trailers that had been brought into the airhead and a Russian ambulance that the company had "liberated."

Throughout the operation, Captain Jacoby reported few supply problems. The First Sergeant and other company administrative personnel kept the supply vehicles well stocked and were generally able to respond to any supply request within 20 minutes. Since the unit had practiced sustainment drills in peacetime, these procedures worked well in combat. The platoons automatically sent ammunition bearers back to a central point when ammunition was brought forward, and casualties were taken back to the battalion aid station in the company supply vehicles after they had been unloaded.

The only major supply problem encountered was with clothing. To cut down on weight, each soldier had only the uniform he was wearing when he landed in Grenada, and some of these were in tatters within the first 24 hours. In addition, the weather was extremely hot and only about half of the soldiers had been issued jungle fatigues before deployment. Because clothing resupply had never been practiced, the unit had no established procedures for moving stocks of jungle fatigues forward from the supply base at Port Salinas to the troops in the field.

Additionally, Captain Jacoby reported that some of the leather boots worn by the soldiers in his company began to deteriorate during the operation, but that this problem was solved when a local cobbler volunteered to repair them and did so in a single night.

At no time during the operation did Company A have a severe supply shortage or a logistical problem that it could not overcome.

### Discussion

The success of Company A in this operation was due, in part, to the excellent logistical support it received upon ar-

rival. This, in turn, was due primarily to the company's sound sustainment SOPs. These procedures, which had been practiced during peacetime training operations, fell neatly into place when the company arrived on the ground. In its planning, the company had carefully considered its logistical requirements, including the soldiers' loads, which were prudently reduced to the minimum required items. The early arrival of ammunition and food items was also planned for, and this plan was carried out efficiently. The soldiers were therefore able to carry a reduced load of ammunition and food while a steady supply of those critical items was assured.

Also important to the mission was the use of company administrative personnel in the sustainment operations. The First Sergeant was in charge of the immediate needs of the company, while the XO, albeit by accident rather than intent, functioned as the company's chief logistician rather than as its second-in-command, and was able to handle the long range needs of the company. It is important to note here that Company A's XO was the only one in the battalion who was used in such a manner and that Company A was the only one to have all of its organic vehicles delivered to it.

Worthy of note, also, is the company's use of locally procured items to fill in the gaps in its logistical support. Since the company was not issued fragmentation grenades before deployment, it used the captured grenades. When its soldiers' leather boots began to disintegrate and a resupply of them could not be procured from approved sources, the company used the volunteer cobbler to repair them. And, finding its supply of vehicles inadequate for the task of sustaining itself, Company A pressed the captured enemy vehicle into service.

The only problem that was not solved was clothing resupply, which had never been practiced previously. This leads one to conclude that in this operation, quite simply, the sustainment operations that had been planned and practiced and firmly established in SOPs, worked; those that had not, did not.

### CONCLUSIONS

In reviewing these and similar military operations, one is struck by the similarity in the logistical procedures used by the units that succeeded and the similarity in the lack of sustainability shared by those that did not.

The guiding principle among the victors was a well-defined plan, not merely for the tactical disposition of combat and combat support elements for the battle at hand but for the disposition of combat service support personnel as well. Additionally, those units that were successful on the battlefield had consistently looked beyond the current engagement to those ahead and had carefully projected when, where, and in what quantity resupply would be accomplished.

The units that were unsuccessful had looked only to the maneuver of combat elements, trusting in some unseen and misunderstood "system" to sustain them. When that system failed, so did the mission.

When supplies were being pushed forward on a regular basis, as in Brest and Grenada, the prudent commander planned for a lower on-hand stockage rate and a more frequent

resupply of critical items. But he still kept a readily available emergency stock in his company trains to rapidly resupply his forward elements if necessary. When he could not be sure supplies could be brought forward in a timely manner, the prudent commander stocked enough supplies to sustain his unit for an extended period without resupply, relying upon the capacity of his company vehicles and the strength of his soldiers to transport the required supplies.

The imprudent commander, on the other hand, stocked too few supplies for a given operation or went to the other extreme and stocked too many.

The rule of thumb among mule packers, when mules were still the standard means of moving supplies to the front, was that one animal should not have to carry a load weighing more than one-third of its body weight. In the U.S. infantry, however, soldiers have often been required to carry into combat one-half to two-thirds of their body weight.

This is unfortunate and also often unnecessary, as it was during the Normandy invasion.

At times, there may be situations when it is necessary for soldiers to carry heavy loads. At such times, though, leaders must recognize the special leadership problems inherent in forcing their soldiers to do so. They will move slower, tire faster, and once in contact, fatigue may indeed make cowards of them all.

In trying to decrease the soldier's load or increase the speed of operations, however, a commander must not sacrifice unit sustainability. If he enters the field of battle without a firm logistical plan or without enough resources to sustain a fight, the unit will not be able to accomplish its mission.

Planning sustainment operations means preparing for them in peacetime by firmly establishing supply SOPs that are both sound and flexible and then training on them. Although no records exist of sustainability training in most of the units mentioned in this article, it is apparent that some of them, most particularly Company F, 23d Infantry, under Captain Duckworth, had some extremely well entrenched SOPs. Company administrative personnel—most notably the XO, the First Sergeant, and the supply sergeant—were in charge of keeping the company supplied, and a vehicle with critical supply items was kept in the combat trains, available on a moment's notice.

Captain Jacoby of Company A, 2d Battalion, 325th Infantry, used similar procedures some 40 years later during the invasion of Grenada. It is worthy of note that Captain Jacoby attributed much of his success during that operation to his logistical support, especially ammunition resupply and casualty evacuation; these had been part of his unit's peacetime training exercises. It is also worthy of note that the only supply channels that failed to work during the operation were those that the unit had *not* practiced.

Another similarity between Captains Duckworth and Jacoby was their willingness and ability to use locally procured and captured items to meet their logistical needs.

In all wars and in all places, the existing system will never meet all of the needs of all of its units. Neither will it be able to plan for all contingencies. Local commanders, then, must use any resources that may become available to them to meet the needs of their units.

A commander, of course, cannot completely ensure that his unit is sustained. Indeed, he should keep his eyes on the guns once the battle begins, relying upon his subordinates to carry out the sustainment plan that was formulated earlier. To this end, it is necessary for the XO, the First Sergeant, and all other administrative personnel to have well-defined duties during sustainment operations. It is also important for the XO to be viewed at least as much a logistician as a second-in-command.

Military history teaches that the most brilliant tactician faces ignominious defeat if he cannot sustain the fight. In order to do this, he must plan his logistical support as an integral part of maneuver. This means that SOPs must be developed—and used.

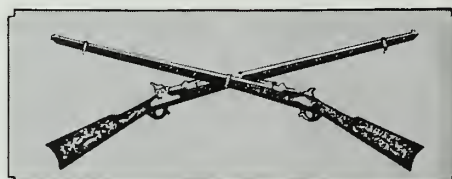
Key personnel must be trained to handle sustainment operations in much the same manner as weapon crews are trained to carry out their missions in support of their units. And while the main thrust of all sustainment operations is pushing supplies to the front, those who occupy positions at the front must always be on the lookout for ways to augment materials that are coming up from the rear or to replace those that are not.

In the final analysis, it is the commander upon whose shoulders and in whose imaginative analysis the key to sustainment lies. He must decide what his soldiers will carry and what they will not carry. He must decide where and how they will be resupplied. And he must decide how the operation will be supported.

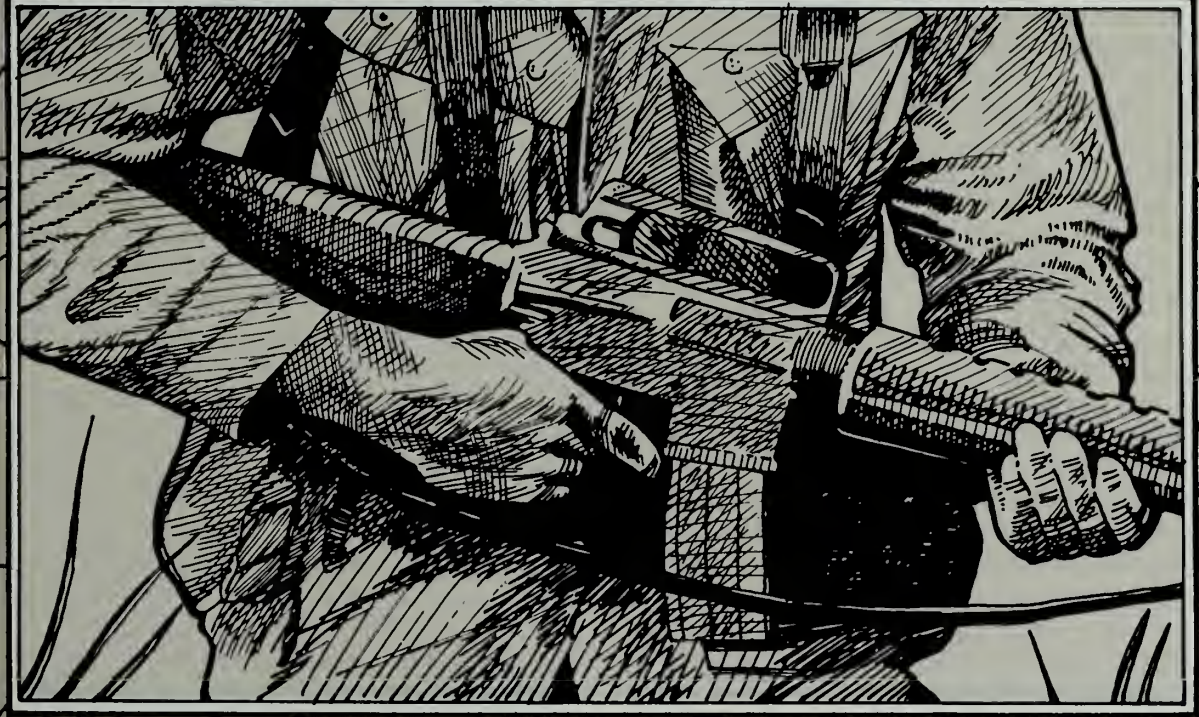
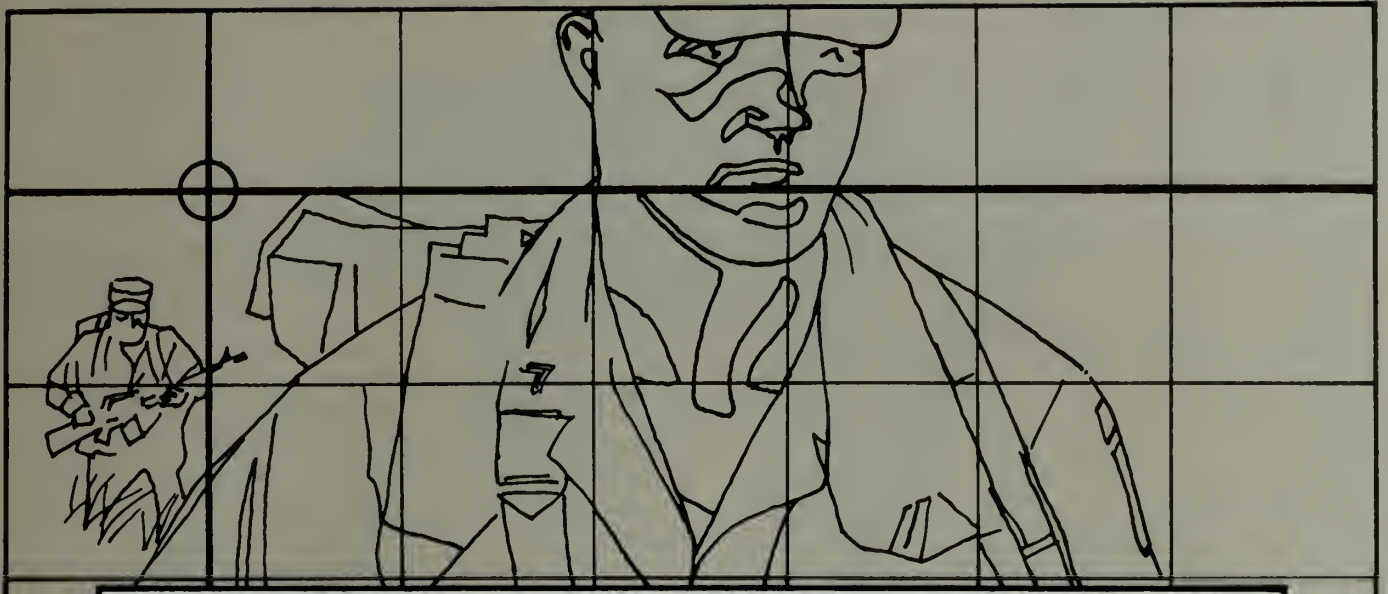
Above all, he must decide whether the resources are available to support the planned operation. He must at all costs avoid the temptation to engage in operations that cannot be supported logistically. Otherwise, he will learn firsthand just what can result from the "want of a nail."



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# THE DAY OF THE BIELEMAN

BY FIELDING LEWIS GREAVES

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In the end it all comes down to one man.

Nations mobilize, entire trainloads of supplies crisscross the continent, great convoys put to sea. General staffs pore over their maps, absorb intelligence reports, make their decisions for the commitment of divisions and armies, and produce elaborate deception plans in support of their operations. Corps and divisions are pointed at their objectives and unleashed. Battalions and companies move forward, meet opposition. Patrols are sent ahead, to probe and discover the enemy, to test him. Squads and platoons are moved up, to apply pressure, to punch a hole for a breakthrough, so that the advance may resume.

Do you want your armies and divisions to advance, to move toward the enemy heartland? Their movement is plotted on maps in command posts far from the scene of the battle, marked on acetate overlays in colorful symbols. Blue arrows advance across the acetate, are erased, and new ones move on. The arrows advance, but the rate of movement is slow and labored, and the unit of measure is small. The army moves forward at the pace of its squads and patrols. The pair of dividers by which its movement is measured wears combat boots. In the end it all comes down to one man.

It is he who buys the advance, who pays the cost in toil and suffering and sacrifice and high courage. It is he who makes the blue arrows move forward — by placing one combat boot in front of the other, endlessly. He is the winner of battles, the bringer of victories, and he bears the proudest title on the battlefield: Rifleman.

## DOMINANT FIGURE

If the armies of the world should ever get together to select an international “Day of the Rifleman,” surely a leading contender for the honor would be the 28th of April. It was on that date, over four and a half centuries ago, that the man with the gun, the foot soldier equipped with the shoulder firearm, became the dominant figure on the battlefield, a preeminence he would hold for the next half thousand years.

This early infantryman with a gun was not then technically a “rifleman,” for his weapon was the smoothbore arquebus. Although rifling in firearms had been invented earlier, it would not be generally used in military weapons until much later. But the arquebus that won the field at Cerignola on 28 April 1503 was the direct ancestor of the Ferguson and Pennsylvania rifles of 1777, of the Prussian needle gun, of the 1873 Springfield and the 1898 Mauser, of the 1903 Springfield and the M1 Garand, and of the AK47 and the M16 of today.

The rifleman of every modern army or partisan band of the 20th century is a direct military descendant of the Spanish arquebusier of over four centuries ago. In the passage of time the weapon evolved: arquebus, musket, rifle; muzzle loader, breech loader; single shot, repeater, semi-automatic, full automatic. But the man endured, unchanged. The term “rifleman” as used today applies no less to the men of

Cerignola than it does to the rifleman of Saratoga, New Orleans, or Beecher’s Island; of Plevna, Spion Kop, or Belleau Wood; of Bastogne, the Pusan Perimeter, or the Delta of South Vietnam.

Before turning for a closer look at the Cerignola birth of the rifleman, let us go back for a momentary glance at the status of the foot soldier before 1503.

At Pydna in 168 B.C., the famous Macedonian phalanx fought its last battle, going down to defeat before the more flexible and maneuverable Roman legion. For the next five centuries the battlefield was ruled by the legions of Rome, the finest infantry in the world. If on occasion the legion suffered reverses, it was due not so much to any fault of its own as to the mistakes of its commanders.

The end of legionary supremacy came at Adrianople in 378 A.D. In that year, on that sad field, perished the Emperor Valens and 40,000 legionary soldiers, cut to pieces by Fritigern and his Visigothic horse-archers. Infantry went into a long eclipse. Cavalry was to be the dominant arm for the next thousand years.

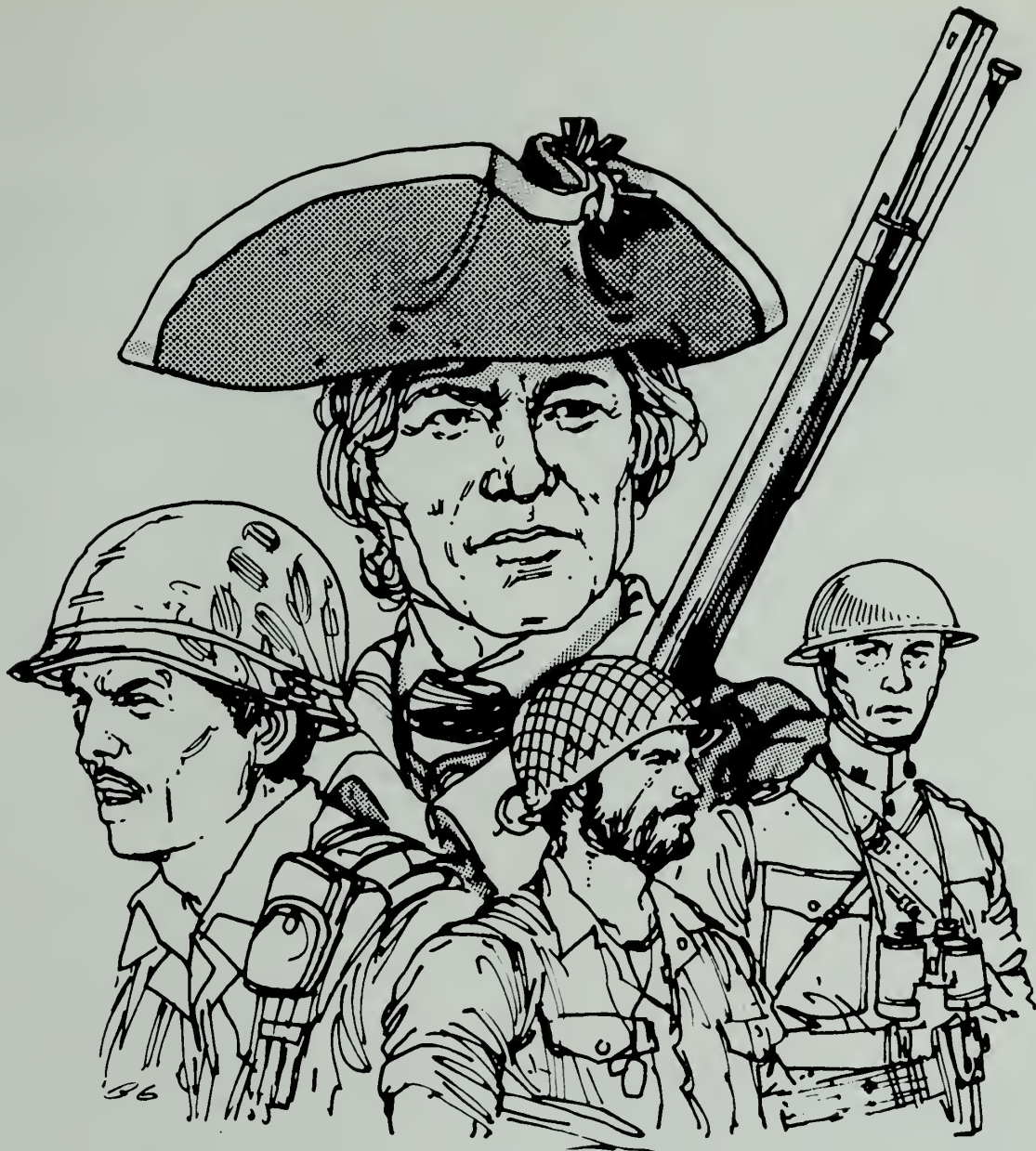
This victory of cavalry over infantry at Adrianople brought a marked change in the practice of warfare, and had the further effect of determining not only the military but also the political and social development of Europe in the Middle Ages. It ushered in a grand parade of mounted warriors through ten centuries: Gothic light cavalry, Byzantine horse-archers and heavy cavalry, crusading knights in shining armor, the Mongol hordes of Genghis Khan — a thousand-year tapestry of charging horsemen — and, with the introduction of Spanish horses into the western hemisphere, spilled over even into the New World and a later time, when Comanche, Cheyenne, and other Plains Indians quickly adapted themselves to a new life on horseback to become the finest light cavalry in the world.

Early rumblings of the returning ascendancy of foot soldiers had been heard in the 12th century. At Legnano (1176) the pikemen of the Lombard League overcame Holy Roman Emperor Frederick I (“Barbarossa”) and his cavalry, Frederick himself barely escaping with his life. This first major defeat of feudal cavalry by infantry foreshadowed by more than a century the later “Battle of the Spurs” at Courtrai (1302) where French cavalymen, bogged in mud, were knocked from their saddles and clubbed to death by Flemish burghers, and the great longbow victories of Crecy (1346), Poitiers (1356) and Agincourt (1415) where superior forces of the finest French cavalry went down to crushing defeat at the heads of the English yeomen and their famous “cloth yard shaft.”

In spite, however, of these impressive victories of dismounted archers over mounted knights, it was to be another century before the infantryman came fully onto center stage again, and when he arrived, it would be a Spanish commander and his arquebusiers who placed him there.

In the late 1400’s the earliest precursor of the rifle was already in existence. Hand cannon and arquebus had been used by soldiers for some years, but in small numbers and usually with more noise than effect. It was left for the “Great Captain” Gonzalo Fernandez de Cordoba of Spain to develop the full potential of the arquebusier.





After suffering a defeat at the hands of the French at Seminara, deep in the toe of Italy, this Spanish commander set about to reorganize his army. Breaking with tradition, Gonzalo equipped one-sixth of his infantry with the latest firearm, creating mixed companies of arquebusiers and pikemen. He reasoned that a defensive action by a strongly entrenched force of combined arquebusiers and pikemen should be able to withstand any attacker, cavalry or infantry. He was soon to prove his new concept conclusively.

In the spring of 1503 Gonzalo was more or less bottled up in the Adriatic coastal town of Barletta by French forces that were then striving to take southern Italy. Receiving a small band of reinforcements from Taranto, Gonzalo was able to slip out of Barletta with his little army. In unseasonable heat and choking dust on 28 April he marched westward, crossing the Ofanto River not far from the site of the ancient battlefield of Cannae, and at last took up a defensive position on a small vine-covered hill 16 miles from Barletta near the little town of Cerignola. A ditch at the base of the hill was quickly enlarged, the loose earth being thrown up as a defensive parapet

behind the ditch, and the bottom of the ditch was lined with sharpened stakes. Behind these works Gonzalo placed his artillery, 13 guns, and his Spanish arquebusiers and German mercenary pikemen, keeping in reserve a small mounted sally force for use as the battle might develop. As it happened, the artillery was to play little part in the fight: Early in the battle a random spark ignited and exploded the powder magazine, effectively putting the artillery out of action.

Meanwhile, the French, under command of the Duc de Nemours, noting the Spanish departure from Barletta, followed in pursuit. On reaching Cerignola they halted for a council of war before finally attacking near sunset. They moved forward to the attack in three units, echeloned to left rear. First, on the right and led by de Nemours himself, was the heavy cavalry, appraised by Gonzalo as the finest body of cavalry in Italy. Next came the Swiss and Gascon infantry commanded by Chandieu, and last the light cavalry under d'Alegre.

The headlong charge of the French right was checked at the ditch, of which they had been unaware in the gathering dusk. As the French cavalry wheeled left across the Spanish front

to seek an opening in the defenses, the Spanish arquebusiers raked them with a deadly and continuing fire. Many fell, including de Nemours, who was mortally wounded by an arquebus ball. Into this swirling scene of confusion now came up the Swiss and Gascon pikemen. They tried to storm the ditch and parapet, but the loose earth and the bristling array of pikes made headway impossible, while the arquebusiers continued to fire into the crowded ranks of the attackers.

French horse and foot now a confused mass before the Spanish position, Gonzalo ordered his sally force to counterattack. The French were routed, the battle quickly over, with D'Alegre's unit hardly getting into the action at all. The whole battle had taken little more than an hour. The following dawn revealed a grim picture: over 3,000 dead and wounded French, half the French force, lay scattered about the field. Their passing marked a larger passing, the end of French efforts to take southern Italy.

But this small battle, as important as it was politically for Italy, Spain, and France, was still more significant for another reason. Its outcome clearly validated Gonzalo's concept for the tactical use of that new type warrior, the arquebusier. Fabrizio Colonna, one of the captains with the sally force at Cerignola, afterward remarked: "Neither the courage of the troops nor the steadfastness of the general won the day; but a little ditch — and a parapet of earth — and the arquebus."

The true significance of Cerignola was best expressed by Field Marshal Viscount Montgomery in his book *History of Warfare*: "Gonzalo de Cordoba had raised the infantry soldier armed with a handgun to the status of the most important fighting man on the battlefield — a status he was to retain for over 400 years."

## VOLLEYS

If any doubted the validity of the conclusions at Cerignola, those results were soon confirmed by later battles at La Motta, Biccoca, and Pavia. Unlike the others, Pavia (1525) was no defensive action. Here the Spanish arquebusiers and pikemen under the Marchese of Pescara attacked the French on open ground. Volleys of arquebus fire wrought havoc among both horse and foot of the French, and the French king, Francis I, was himself taken prisoner.

Gonzalo had made his point. The armies of Europe were not long in following his example. At Cerignola only one-sixth of the Spanish infantry had consisted of arquebusiers. As time went on, the proportion of firearms to pikes steadily increased. A century after Pavia, in 1626, a British military writer recorded that "According to our present discipline, a company of 200 men would contain 100 pikemen and 100 musketeers" — the musket by then having replaced the arquebus. By 1642 and the outbreak of the Civil War in England, Cromwell's New Model Army had two musketeers for every pikeman. Ultimately, with the invention of the plug bayonet, the need for pikemen disappeared.

In the early 1500s, while these first "riflemen" were becoming ever more important components of European military forces, they were not so popular with those whom they were

rendering obsolete, the mounted knights. The famed Chevalier Bayard, for example, the French knight *sans peur et sans reproche* (without fear and without reproach), lived in those early days of the firearm. This intrepid knight so detested (or feared?) the thought of being vulnerable to death from a distance, and at the hands of a social inferior, that he was guilty of most unknighly conduct: He made a practice of summarily hanging any Spanish arquebusier who had the misfortune to fall into his hands. Bayard must have had a premonition, for in his last combat, a valiant rearguard action at the crossing of the Sesia River in northern Italy in April 1524, he was slain by an arquebus ball.

The Age of Chivalry and knighthood had ended. The work that was started by English archers was completed by the Spanish arquebusiers of Gonzalo de Cordoba.

The Day of the Rifleman dawned over four and a half centuries ago, and the rifleman's sun is still high in the sky. Armored carriers and helicopters have increased, not diminished, his role on the battlefield. "We must never forget," remarked General Lyman L. Lemnitzer, former Chairman of the U.S. Joint Chiefs of Staff (1960-62), "that the military purpose of war is to achieve control over land and the people who live on it. The ultimate measure of the control which has been attained is the area dominated by the infantryman with the fire of his individual weapon. In the final analysis, the success with which that domination is established, maintained and extended depends in large part on the soldier's mastery of his rifle."

General Bruce Clarke said in his *Training Guidelines for the Commander* that "The fighting man on the ground is the 'ultimate weapon' — the fundamental factor of decision.... The soldier who can and will shoot is essential to victory in battle." In the words of General Matthew Ridgway, "There is still one absolute weapon...the only weapon capable of operating with complete effectiveness — of dominating every inch of terrain where human beings live and fight, and of doing it under all conditions of light and darkness, heat and cold, desert and forest, mountain and plain. That weapon is man himself."

In 1503 Gonzalo de Cordoba made the infantryman with a gun the most important man on the battlefield. In 1962, four and a half centuries later, the then U.S. Secretary of the Army, Elvis Stahr, remarked that "Despite all the powerful weapons systems available for our defense today, the rifleman still bears a major responsibility for the security of the land on which we live, from which we draw our sustenance, and to which we must return after every flight into space or fancy. Indeed, it is still the thin line of uniformed riflemen who form the true cutting edge of our national power."

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**Fielding Lewis Greaves** is a retired Military Intelligence officer. A former China area specialist and former Field Artillery officer, his assignments have included two attache tours, two Army Language School courses, two tours on the Army's top G-2 staff at the Pentagon, and three years as a Command and General Staff College instructor. His articles on a wide variety of subjects have appeared in various publications.

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# TRAINING NOTES



## Bradley Gunnery Training

LIEUTENANT THOMAS G. ZIEK, JR.

The introduction of the M2 Bradley infantry fighting vehicle (BIFV) into the Active Army's inventory brings along with it the need to change not only our tactics but also our methods of training mechanized infantry units.

The Bradley moves faster than any vehicle the infantry has every had, and its weapon systems — the 25mm chain gun, TOW missile system, M240C coaxial machinegun, and M231 firing port weapons — make it one of the deadliest pieces of equipment in the world. It enables an infantry squad to fight through to the objective using the vehicle's armor for protection. In addition, its thermal energy equipment allows the squad to rob the enemy of the protection of darkness.

All of these advantages will count for nothing, though, if the infantry squad is not properly trained to use the vehicle and its weapons.

Training for Bradley infantry squads should emphasize two areas: gunnery and crew drills. Without adequate gunnery training, the crew will not be able to use the on-board weapon systems to their fullest advantage. Some targets may be engaged with the wrong type of weapon system, for example, or, because of poor fire commands, targets may not be engaged at all.

Ranges are a problem, though. Because of the nature of the 25mm cannon on the vehicle, most of the existing infantry vehicle gunnery ranges are too small. Fortunately, this is changing as more and more Bradley ranges are be-

ing built. Meanwhile, existing tank ranges can be used for Bradley gunnery practice, but the Bradley units will have to compete with tank units for these already scarce tank ranges, and the priority for their use will normally go to the tank units.

### RANGES

This lack of adequate live fire ranges for Bradley gunnery training can be overcome to some degree by a good, well-planned home station gunnery program. This program is not a substitute for actual live fire and gunnery exercises, but it does enable the crews to get the maximum training value from those exercises once ranges become available.

Home station gunnery training has several advantages that recommend it to immediate implementation. It can be easily set up, it is relatively inexpensive, and it makes use of motor pool "down" time. Everything needed for both home station gunnery training and the corresponding squad drills can be easily obtained or made by a unit's Training Aids Support Center.

#### INFANTRY HOTLINE

To get answers to Infantry-related questions or to pass on information of an immediate nature, call AUTOVON 835-7693, commercial 404/545-7693.

For lengthy questions or comments, send in writing to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, GA 31905.

This training program can be broken down into two basic phases: initial training and scaled range training. The initial training phase starts with the basics: range estimation, target acquisition, fire commands, and turret manipulation.

The crew must be trained in range estimation using the stadia line method and the mil relationship method. To help the crew estimate range faster, every vehicle should have the mil range relationship table that appears on page 8-4 of FM 23-1 affixed either to the turret top on the commander's side of the vehicle or to the gun guard door.

Range estimation can be taught anywhere — the motor pool, an open field, a classroom. Training aid models can be made or drawn from the TASC, binoculars can be used, or a Bradley can be brought to the training site.

Target acquisition — the ability to identify targets; classify them as either friend or foe; categorize them as most dangerous, dangerous, and least dangerous; and assign them priorities for engagement — should begin with vehicle identification. Once the crews have become adept at this, the gunner and commander should be taught how to categorize threat vehicles.

When the commander and the gunner are skilled at categorizing targets, both should be allowed to practice this skill. For example, slide projectors can be used to flash images of targets with an exposure time of three to five seconds. In fact, this technique can give them the

practice they need in all aspects of target classification.

Another task taught in the initial phase is how to issue fire commands and do the specific duties that each crew member must perform. The crew must master five basic fire commands — TOW, battlesight, precision, degraded, and firing port weapons. It is essential that the gunner master every task that he must accomplish to get the first round downrange — selecting the proper weapon system and ammunition, arming the system, acquiring the target, selecting the proper range, switching from low to high magnification once the target is acquired, picking up a good sight picture, and squeezing the trigger. (These are the duties a gunner must perform during a precision gunnery fire command.)

## **FIRE COMMANDS**

This task can be practiced initially in a dayroom or classroom with both the commander and the gunner going through the fire commands. Once both members feel comfortable with each other, they can move either to a turret mock-up or to an actual vehicle and tie the fire command to the specific duties of engaging a target. (A turret mock-up should be built for practice to save wear and tear on the Bradley.)

The final task in the initial phase of this training is manipulation — acquiring and tracking targets. Manipulation training can be divided into three phases: Worm board training, the use of scaled ranges, and stabilization runs.

A worm board is a board with two parallel lines painted on it to simulate vehicular movement when a gunner tracks along its length. It is effective in giving both the commander and the gunner tracking experience in both the manual and the power modes of turret operation. It is easy to make and can be hung anywhere.

A scaled range is set up to give the commander practice both in issuing fire commands and in laying the gun. It can be set up anywhere — a corner of the motor pool, an open field. Scaled range training reinforces everything that has been done up to this point in home sta-

tion gunnery training.

Stabilization runs should be programmed into the training. This is the most important exercise, because it shows the coordination of the commander and the gunner in target hand-offs (the gunner taking control of the turret once he has acquired the target), and also in fire commands and crew duties. If there have been any problems in the training of the Bradley commander and the gunner as a team, they will show up here, early enough to be rectified by additional training.

The second phase of home station gunnery training is subcaliber range training. This range gives the gunner, the commander, and the driver an opportunity to fire, sense, and correct actual rounds going downrange.

Depending on space and available money, one of three types of subcaliber ranges can be set up: a 1/35 scale range using either 5.56mm ball or .22 caliber rimfire ammunition; a 1/60 scale range using .22 rimfire ammunition; or an M55 laser range.

The subcaliber ranges for 5.56mm and .22 caliber rimfire ammunition are set up the same way. Unit master gunners will be able to offer advice on target mixes for gunnery practice, the proper spacing of targets, the space needed to set up a range, safety considerations, and materials needed to mate the subcaliber weapons to the Bradley.

Because neither 5.56mm nor .22 caliber rimfire ammunition acts the same ballistically as 25mm ammunition, extreme care must be taken in training gunners. Once the subcaliber device is zeroed to the sight unit, the gunner cannot index a different type of ammunition or a different range without destroying his zero. Because of this, the gunner must not be allowed to fire on a subcaliber range until he has mastered the initial gunnery phase. For training purposes, however, it is up to unit leaders to make sure their gunners are going through the motions of indexing range and ammunition.

If for some reason a subcaliber range cannot be set up or used at a unit's home station, the same training can be accomplished using a stout board, an M55 laser, scaled targets, reflective targets,

the Brewster device, and the Fioni adapter.

All that is necessary is to set up a scaled range, place the board so that it is out of the gunners' field of view, and mount the M55 laser to the M2. Once this has been done, either the master gunner or the unit leader "chokes" the targets using the ISU's stadia lines, indexes the proper ammunition type and range, aligns his sight with the center of mass of the target, and then engages the laser. An outside helper then places the appropriate reflective target (center of mass) where the laser will strike the board. This is then done for all targets. The proper ranges and ammunition are written on a sheet of paper and used to help critique the commander on his ammunition selection and range estimation.

Once this has been done, the gunner and the commander are put into the turret, where they go through their engagement sequence, doing all the tasks as if ammunition were actually being fired. Once the gunner has announced "On the way" and has fired the M55, the commander can look down at the board and give his sensing corrections from there, at the same time practicing burst on target, a critical M2 gunnery task. Because the crew can use all the controls realistically and also sense rounds, whenever possible the M55/stout board range should be used instead of the other subcaliber ranges.

## **SIGHTS**

The use of the thermal imagery sight in the ISU takes considerable practice to master. Since there is now no set way of teaching the use of thermal sights, units must be inventive in their training. Field problems give the crews an excellent opportunity to manipulate the sight. Scaled targets made of tin can be fashioned and then heated with a candle to simulate targets.

Since the M2 is an infantry squad vehicle, during home station gunnery training special emphasis must be placed on training the dismount element to use the M231 firing port weapon properly. Because of the M231's high rate of fire, and because of low ready ammunition avail-



ability, every effort must be made to allow the dismount team to practice using the weapon from the vehicle itself. Otherwise, one of the vehicle's key capabilities is wasted.

The dismount team, therefore, must learn to give quick, accurate spot reports and fire commands for the M231, serv-

ing as extra eyes for the commander. This again improves both the team concept and the capabilities of the vehicle itself.

A strong, coherent home station gunnery program is critical to the training of Bradley crews, for it will ensure that once a unit does get some range time, it will

be able to use that time to the best advantage.

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# NTC: Lessons Learned

CAPTAIN GREGORY M. HERITAGE

Military actions over the past two or three years have served to remind us that war can come without warning. Our units, therefore, must be thoroughly trained during peacetime to be ready for war anytime, anywhere.

The National Training Center (NTC) at Fort Irwin, California, was established as a place where our units could train under realistic combat conditions. Units in training at the NTC often make mistakes, but from those mistakes they learn lessons that improve their operational readiness. Other units, too, can study these same lessons and, perhaps, avoid making the same mistakes when they go to the Center to train.

Reports from the NTC and observation reports from officers who visit there specifically mention certain recurring problems in the areas of planning, troop-leading procedures, communications, tactical operations, and logistics. Accordingly, a discussion of these problems may help other units to avoid them and conduct better training both before going to the NTC and while they are there.

## Planning

First, in their planning, battalion commanders must develop procedures for using their staff officers more fully. Too often at the NTC, a battalion commander's plan is seriously flawed because of a superficial or inadequate METT-T (mission, enemy, terrain, troops, and time) analysis. This usually occurs when

a commander and the S-3 ignore the battalion staff and develop their plan without sufficient consideration of the unit's current equipment status or its logistical support. A plan that lacks a thorough staff analysis often has inherent problems that are quick to surface when the operation begins.

At the same time, each commander must make sure his intent — his purpose and overall goal — is completely understood. If it is not, there will be a lack of initiative on the part of his subordinate chain of command.

Another planning problem involves the development of an appropriate task organization in which units can be integrated to form a combined arms team. The appropriate task organization depends, of course, on the situation. Nevertheless, battalion commanders at the NTC have been known to employ pure infantry or pure tank companies when the situation clearly called for a mixture of some sort. In war, as a result, a unit could either suffer an excessive number of casualties or could be unable to bring its full combat power to bear on any enemy force. A commander must be flexible, too, ready to reorganize his forces as the situation changes.

In the planning process, commanders must also demand that only standard graphic signals be used to represent control measures on maps and overlays, and that these depictions be accurate. At the NTC many units use graphic symbols that are confusing, incomplete, or not

precisely depicted.

Finally, a unit's plan must take into consideration the use of emergency signals. Such signals are often crucial when a unit lifts or shifts fires, and when it conducts a withdrawal.

## Troop Leading

The primary lesson learned in regard to troop-leading procedures is this: Leaders must follow through with inspections. Part of this problem at the NTC stems from the fact that senior leaders are late in issuing warning orders and operations orders, leaving their subordinate leaders too little preparation time. Many leaders, however, fail to inspect even when there is plenty of time. (Junior leaders, in particular, have a tendency either not to check at all or to oversupervise.)

Another problem is that both battalion and company commanders tend to try to do too much themselves instead of delegating some tasks to their key subordinates.

## Communications

Communication security continues to be a major concern at the NTC. Enemy interception and direction-finding capabilities make radio use hazardous, yet radio transmissions at the NTC occur too frequently and last too long. Soldiers also unthinkingly reveal their positions by relating them to landmarks

that are visible to both friendly and enemy forces.

Remote or directional antennas are seldom used; wire communication is not used enough; and messengers are rarely ever used. Also, command nets are often cluttered with detailed instructions that are a direct result of poor planning.

### **Tactical Operations**

Many lessons have come from the tactical operations conducted at the NTC. For example, one of the most important lessons is this: Continuous reconnaissance is necessary, not only for gathering information but also for security reasons. But experience tells us that many unit commanders do not emphasize reconnaissance activities. As a result, their units fail to patrol aggressively, especially at company level. Furthermore, listening posts and observation posts are not used to their full potential.

Units tend to limit the number of patrols they send out, relying instead on the scout platoon to screen the front. But the scout platoon's primary mission is to help the commander see the battlefield. When enemy contact seems possible, this is what it should be doing. Routine screening missions and coordination with adjacent units should be its secondary missions. (Because the platoon has limited firepower, it should avoid decisive engagement during these missions.)

In short, all front line units must be required to patrol aggressively and continuously, and the scout platoon should be used to provide continuous observation.

Although commanders usually conduct a personal reconnaissance before issuing an operations order, they tend to leave behind key leaders who could also benefit greatly from that reconnaissance. Commanders also tend to overlook supporting aircraft as a valuable source of current information.

Another important lesson from the NTC concerns night attacks. We all agree that our units must be trained to conduct effective night attacks because they can greatly reduce casualties. Unfortunately, at the NTC, too few units seem to know how to conduct them.

Night attacks must be simple and

clandestine. But at the NTC they often include complex schemes of maneuver that result in uncertainty and confusion. Poor navigation then adds to that confusion. (Navigation, overall, needs much improvement.) Soldiers use lights carelessly and make too much noise, and units use their vehicles' "blackout drive" lights within sight of the opposing force (OPFOR).

Many times, too, surprise is completely lost before an attack jumps off because of vehicle noises and radio transmissions. Seldom is artillery or mortar fire used to muffle the noises, and soldiers often forget tools (such as wire cutters) that could enable them to remove obstacles more quickly. Then, following a night attack, reorganization and consolidation efforts are also excessively confusing.

Battle drills need to be emphasized so that soldiers will react immediately and correctly when they are fired upon. These drills should include obstacle breaching; actions on enemy contact, air attack, artillery fire, and nuclear-biological-chemical (NBC) attack; and reorganization and consolidation following an attack.

Breaching operations should be executed like a drill, and obstacles should be removed quickly. Ideally, units should breach obstacles before attacking, making several breaches. The breached lanes should then be marked with standard markers and guides made available. Smoke should be used to protect the engineers while they breach an obstacle. If these measures are not taken, units tend to bunch up during breaching operations, creating lucrative targets for enemy air attacks.

A number of other tactical operations lessons that have come out of the NTC:

- Tactical operation centers (TOCs) need to be used more effectively. Experience at the NTC indicates that TOCs are not able to perform planning, reporting, or command and control functions adequately. Sometimes they are too far to the rear to be effective in communicating and coordinating information. Sometimes, too, a junior leader is left to supervise the TOC, and this practice has resulted in such errors as single-echelon displacements and TOC locations in terrain that practically prohibits the use of

radio communications. Lack of security for a TOC is another common problem. (TOCs also need a central working area to make coordination easier.)

- Ground surveillance radars (GSRs) are not used effectively at the NTC. They should be integrated with a unit's fire control system to assist that unit in acquiring targets and adjusting fires. They can also be used during both day and night attacks to help a unit with its navigation. (It is well to remember that GSR elements must have adequate security.)

- Redeye, Stinger, and Vulcan anti-aircraft elements must be near the front so that they can protect the friendly unit from enemy air attack. The Redeye and Stinger elements will have only limited mobility, so that must be taken into consideration when they are deployed.

- Whenever they halt, units should seek cover and concealment and deploy their anti-aircraft weapon systems. All too often during halts on a road march, units take no protective action at all and thus become obvious targets for enemy aircraft. All vehicles should have air guards because the enemy's air threat cannot be ignored, and there is no guarantee that we will always have air superiority in future conflicts.

- Vehicles under air attack should not use vehicle-generated smoke, because the smoke will clearly pinpoint them as targets.

- Flank shots are far superior to frontal engagements, and shots from both flanks are better still. A few well-sited weapon systems often cause the enemy the most casualties. Once the battle has started, it is often useful to reposition key weapons to bring as much destructive power as possible on the enemy.

- Frontal attacks are used too often, even when flank attacks are possible, and frontal attacks can result in high casualties. Furthermore, in a frontal attack, the attacking forces tend to lose momentum upon contact with the enemy; they slow down and become exposed to enemy fires at the very moment when aggressive violent action is needed to overcome the enemy defenses.

- Units must be prepared to form combined arms teams instead of fighting their own battles as individual units. When



various units fight their own battles, the result is often piecemeal commitment and a failure to concentrate the combat power needed to defeat enemy defenses. Casualties increase, too, when units fight individually and fail to form combined arms teams.

•During attacks, armored personnel carriers must provide machinegun fire to help protect the leading tanks. Overall, suppressive machinegun fire is not used effectively at the NTC. Furthermore, leaders appear to be hesitant about dismounting their troops, even when facing strong antitank guided missile defenses. Finally, when the soldiers are dismounted, their individual fighting positions tend to be too wide and not deep enough to provide them proper protection from enemy fire.

### Logistics

During NTC operations, the combat elements often run low on ammunition and fuel because they are not properly resupplied. The first lesson regarding logistics, therefore, is this: Resupply must occur at every opportunity, especially before attacking and immediately afterward. A continuous resupply effort will ensure that units get the supplies they need to handle unforeseen events.

Vehicles should be required to “top

off” even when their tanks are nearly full, but adequate cover, concealment, and security must be provided during the refueling operation. Continuous refueling will also ensure that a unit’s vehicles are always ready for extended movements.

Company trains must be far enough from their supporting unit to avoid being vulnerable to direct fire; task force trains need to be close enough to be responsive to supporting units. At the NTC, company trains tend to be too close, and task force trains too far back. Furthermore, task forces tend to concentrate entirely on the enemy forces to their direct front. Consequently, their lines of communication are often vulnerable to enemy troops who may have been bypassed or who come around open flanks. Supporting train elements must have proper security. Yet, too often train security elements have no antiarmor weapons with which to defend themselves against enemy armor.

Logistical responsibility for supplying attached elements must be clearly established. This is essential in keeping special equipment operational.

Maintenance deficiencies should be corrected daily. Following a two-week NTC training cycle, units request an average of 6,500 repair parts for their vehicles during their recovery periods. It is obvious from this statistic that units are

waiting to correct their vehicle deficiencies during these recovery periods. This is the wrong thing to do; in actual combat, during which operations will have to be conducted for extended periods, maintenance deficiencies must be corrected daily if a unit expects to keep on the move. In short, proper maintenance and an adequate resupply of spare parts are essential for success on the modern battlefield.

It is evident from these lessons learned at the NTC that our combat units must improve in their training if they are to be fully prepared for war.

Our combat units, and our supporting elements as well, must be ready to deploy to an active war zone on a moment’s notice. Our leaders must take advantage of the lessons learned at the NTC, and must incorporate those lessons into their own training programs. We can afford to make mistakes — and to learn from those mistakes — in peacetime; the price of error in combat is too high.



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# NTC: Techniques

LIEUTENANT COLONEL ALAN G. VITTERS

The National Training Center (NTC) at Fort Irwin, California, is one of the finest military training facilities in the world today. Among its unique aspects are an instrumented battlefield and a live opposing force (OPFOR) regiment. Combat realism is achieved through the employment of MILES (Multiple Integrated Laser Engagement System) sensors and monitoring devices and through the

OPFOR, which is trained and equipped to challenge the best of our own forces.

The purpose of this article is to share some of the lessons learned and the techniques of combat (or “field craft”) devised during one mechanized infantry battalion’s rotation at the NTC. Some of these techniques are not particularly innovative, but they seemed to work well in the stressful desert training environ-

ment at Fort Irwin.

A unit scheduled to go to the NTC needs to do several things before it deploys.

First, it needs to run an effective leader training program. As the highly professional German Army discovered before World War II, leaders can learn a lot through the use of sand tables, chalk talks, and TEWTs (Tactical Exercises

Without Troops). Today, leaders can add to that list simulations (especially CAMMS and ARTBASS).

An excellent way for leaders to increase their knowledge of the threat (and of the OPFOR they will face at the NTC) is to study and reflect upon the series of NTC-related articles in *Red Thrust Star*, a publication put out by the FORSCOM OPFOR Training Detachment at Fort Hood. It will also help them if they are tested periodically on OPFOR doctrine and tactics.

Another pre-deployment task for commanders is to prepare the family members of the unit's soldiers for this major training event, giving them as much information as possible. Wives appreciate having a better understanding of the environment in which their husbands will be training, and they also need to have a chance to prepare for the extended separation. They may need to plan for paydays, for example, adjust appointment and social calendars, and arrange for Powers of Attorney or other legal assistance.

In addition, family members like to share in the excitement that surrounds an NTC rotation and can often plan separate activities around the unit's departure and its return.

There are some useful devices that the unit can prepare before it leaves for the training center. Since managing direct and indirect fires at NTC will be critical, it will be important for adjacent elements to be able to readily recognize their sectors of fire. One technique for doing this is to use clearly recognizable target reference points (TRPs).

A unit can construct a TRP marker by fastening a plywood board to an engineer stake. If the enemy side of the board is painted a sand color and the friendly side in luminescent paint, such a marker can be effective in both day and night operations. Chemical lights can be hung on the wood panel at night to create a lighted effect. (Unit SOPs should designate team or company colors, and the markers should be painted and issued in compliance with those SOPs.)

Vehicle marking systems that will help the unit identify friendly equipment can also be developed. Such a system is valuable when the battlefield is obscured,

when elements get mixed together, and when ground movement needs to be directed from the air. In addition, maps can be printed with TIRS (Target Identification Reference System) points already on them. This way, this information will be less likely to be erased or washed off in the heat of battle.

One of the items the unit should plan to take along is a good mimeograph machine to use in copying orders. At the NTC, written operations orders must be prepared at task force level for each tactical event. It is not uncommon for these orders to be as long as 10 to 20 pages, depending upon the type of operation and the planning time available. Since copies of these orders have to be submitted to the NTC evaluators and, of course, to attached, subordinate, and higher units as well, as many as 30 copies of orders may be required.

The "jelly roll" device is sometimes used, but a mimeograph machine such as the A.B. Dick is more effective. My battalion used one of these machines, and it produced fast, high-quality copies in the field, failing only once when the handle broke.

Once the units begin their training at the NTC, commanders must be aware of the importance of managing time on the modern battlefield. Subordinate units must be given enough time to conduct their planning, write orders, and perform reconnaissance and rehearsals before the battle. Higher headquarters, therefore, should abide by the one-third/two-thirds rule, never using more than one-third of the planning time available in issuing its own directives and orders. Proper adherence to this simple, basic rule of tactical procedure pays dividends and is rewarded at the NTC.

Before each tactical operation, the commander of a unit must make sure his subordinates understand his intent and his concept of the operation. This will enable them to take charge when operations become decentralized and they are left on their own. Controlling the battle by radio may be a luxury the OPFOR's jamming capabilities won't allow. For these and other reasons, it is critical, as the situation permits, for commanders to require subordinate commanders to backbrief them on their plans before crossing the

LD. This technique can help reduce some of the self-induced "fog of battle" a unit often experiences.

Whenever possible, commanders (particularly task force commanders) should use attached helicopters to conduct aerial reconnaissances before an operation. These aerial reconnaissances can be particularly valuable during defensive operations in determining the location of fighting positions and in monitoring the progress of construction. (Engineer units can assist in constructing overhead cover to augment the barrier materials available to the infantrymen digging fighting positions.)

In addition, air scouts can be helpful in locating any OPFOR reconnaissance vehicles (BRDMs and motorcycles) that may have penetrated friendly positions by stealth to gather intelligence on friendly positions.

Finally, the single most important skill soldiers need if they are to kill the OPFOR is proficiency with the MILES devices on their individual weapons. Soldiers need to zero their MILES devices before each tactical operation (the OPFOR does this religiously), and they need to develop confidence in the system. They can achieve that confidence by practicing and by learning techniques such as mounting sensor bolts on distant targets and gradually increasing the number of sensors they can engage until they achieve highly accurate MILES firing.

To succeed at the NTC, a unit needs several critical ingredients — its authorized number of personnel, the opportunity and funds to conduct annual ARTEPs, and tactically proficient and competent soldiers at all unit levels. The techniques offered here are not meant to substitute for these ingredients, but they help make *your* unit all that it can be in training for and in going to war.



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# ENLISTED CAREER NOTES



## SQI ORDER OF PREFERENCE

A soldier's skill qualification identifiers (SQIs) appear as letter codes in the fifth position of his five-digit PMOS and SMOS codes. This letter on each identifies special qualifications the soldier holds.

SQIs have an order of preference as set forth in AR 600-200, Paragraph 2-33, as follows:

- V (Ranger-Parachutist)
- Y (Pathfinder)
- P (Parachutist)
- M (First Sergeant)
- X (Drill Sergeant)
- G (Ranger)
- K (NCO Logistics Program)
- H (Instructor)

Either the commander who has custody of the soldier's Military Personnel Record Jacket (MPRJ) or the training activity commander awards an SQI.

When an SQI is removed from the PMOS because the soldier has been awarded an SQI with a higher recording preference, the lower SQI is then recorded on the SMOS. This does not apply, however, when the skills of the new SQI include those of the old one. For example, if a soldier's PMOS carries a P (for Parachutist) and he later earns a V (for Ranger-Parachutist), the V is recorded on his PMOS and the P is dropped entirely instead of being entered on his SMOS. Then another SQI (if he has one) can be recorded on his SMOS — an X, for example, if the soldier is also drill sergeant qualified.

All personnel concerned (military personnel office, battalion personnel center, unit First Sergeant, and the soldier himself) share the responsibility for seeing that the soldier's qualifications are registered (where applicable) in the Enlisted Master File (EMF). The proper recording of these codes is essential to the effective management of specially trained soldiers.

For the SQIs not listed above, the most recently awarded SQI (except "L") will be recorded first.

## SSG PROMOTIONS

Beginning with the next sergeant first class promotion list, expected to be released in February, promotable staff sergeants will receive their stripes on the basis of the needs of their particular MOSs — not on seniority alone.

The change will not affect how staff sergeants are chosen for promotion, nor will it affect the number selected.

Instead of having one promotion list arranged by seniority as in the past, a separate promotion list will be prepared for each MOS. Within each MOS list, however, the soldiers will still be promoted by seniority.

Under the old system, the number of soldiers promoted in some MOSs exceeded the number of job vacancies in the MOS, while other MOSs remained critically understrength.

In some cases, this change may benefit soldiers already filling sergeant first class positions, because they can be promoted and paid for the duties they are already performing.

## CORRECTION ON INFANTRY ANCOC NOTE

The item on Infantry ANCOC in our November-December 1985 issue (page 42) needs to be corrected.

That note states that the course is tracked — that all CMF 11 students receive training in certain common subjects and then the 11B, 11C, and 11H students follow different tracks.

This is incorrect.

All the students — 11B, 11C, 11H, and 11M — receive the same instruction.

The earlier note also states that appli-

cants must be staff sergeants, but they can also be promotable staff sergeants or sergeants first class.

The remainder of the item is correct.

For additional information on the Infantry ANCOC program of instruction, anyone interested may refer to AR 351-1 or call the Directorate of Training and Doctrine, U.S. Army Infantry School, at AUTOVON 835-1612 (SFC Carpenter or CPT Martin).

## GETTING PROMOTED

Each time an SFC/PSG promotion list is published, the questions start. Some staff sergeants ask, "Why wasn't I promoted?" or "Why should I continue to seek the tough jobs?"

Meanwhile, their commanders and supervisors are also wondering why these good NCOs have not been selected.

On each selection board it seems that a large percentage of those selected have been considered previously—some several times. Why does this happen?

For one thing, the needs of the Army may change from year to year. An NCO now competes only against those in his own MOS, and the number of projected vacancies at the next higher grade determines the number to be promoted. And with force modernization and changes to the force structure, the number needed in each MOS may also vary from year to year.

Another factor, however, is that these NCOs may have improved their files. If you are still trying to be selected for promotion, there are several things that you can do to improve your own file.

First, if you have any old Article 15s in your Official Military Personnel File (OMPF) at the Enlisted Records and Evaluation Center (EREC), get them out. AR 27-10 contains procedures for transferring old Article 15s (received, per-

haps, when you were in a junior enlisted grade) from the performance portion of your OMPF to the restricted portion. (Selection boards do not see the restricted portion.)

Then you must put the same effort into preparing your OMPF to appear before the board that you put into preparing yourself to appear personally before a local promotion board. (For the local board, you reviewed your local personnel file for accuracy; made sure your uniform was spotless and sharply creased, shoes spit-shined, and ribbons new and properly worn. You did all this detailed preparation because you knew it would make a favorable impression on the board.)

Check your file yourself before the board convenes. Make sure all your awards and decorations are listed and see that the documents that should be on your OMPF are there—EERs, academic reports, and course completion certificates for resident and nonresident courses. At the same time, make sure all the records in your file are yours and not someone else's.

Check your photograph. In it, you should be standing at attention, wearing the correct uniform with the proper fit. In short, make sure the photograph shows you the way you want the board to see you.

Are you physically fit? If you are overweight, lose what you need to lose. If you can't pass the APRT, work out, get in shape, and pass it!

Don't give up hope if you have failed an academic course. Take it again. If you can't retake a resident course, do it by correspondence. Study your military skills and do the best you can on your SQT. Raise your GT score if it is below 100. Continue with civilian education, and make sure the courses are properly reflected on your PQR and OMPF.

Seek out the toughest leadership job. Be a squad leader, a platoon sergeant. If your current duty position has you supervising several people, make sure the duty description and narrative portion of your EER reflect this leadership information. The "tough jobs" tend to stand out when selection board members review assignment histories.

Competition for promotion is tough.

There is no single item that will guarantee your promotion. You must be strong in all areas, do well in all your jobs.

Seek the tough leadership jobs, stay physically fit, take your SQT, if available, and score high. Keep your official records current. The opportunities are there.

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### **PLDC REQUIRED FOR PROMOTION**

As of 1 July 1986, in order to be promoted to staff sergeant, sergeants will have to be graduates of a primary leadership development course (PLDC).

This requirement is intended to ensure that all soldiers being promoted to staff sergeant have had a primary level of leadership training. Soldiers who have graduated from a PLDC or a primary or basic noncommissioned officer course (PNCOC or BNCOC) will be considered to have met this requirement.

Soldiers on the staff sergeant promotion standing list who are not graduates of one of these courses as of 30 June 1986 will be removed, and no soldiers will be recommended for promotion unless they are graduates.

Meanwhile, attendance at this course will be restricted to sergeants and promotable sergeants so that they will have every opportunity to attend.

Primary leadership development courses are conducted at noncommissioned officer academies throughout the Army.

Although sergeants review their records when going before staff sergeant promotion boards, NCOs who have graduated from an accredited leadership course should make sure their diplomas are in their official personnel files. Soldiers can contact their unit First Sergeants or personnel NCOs for more information.

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### **PSYOP MOS**

The Army has opened a new enlisted military occupational specialty that gives soldiers in the psychological operations (PSYOP) field more specialized training and a better chance at promotion and

career advancement.

The new PSYOP MOS (96F) was implemented on 1 October 1985 for both active duty and Reserve Component personnel. (Reserve personnel currently account for 76 percent of the Army's PSYOP manpower.)

PSYOP positions were previously filled by soldiers from selected MOSs who had attended the four-week Psychological Operations Course at Fort Bragg and had received the "W" special qualification identifier. But once these soldiers had completed a tour of duty in a PSYOP unit, the identifier was sometimes dropped or replaced, making it difficult to identify course graduates for future PSYOP assignments.

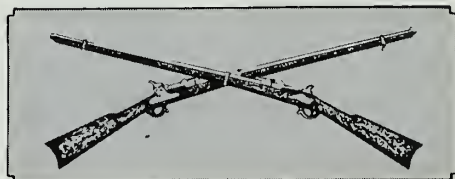
The new MOS is expected to improve the management of personnel and to make better use of training money by reducing the need for retraining soldiers for PSYOP positions.

PSYOP personnel will now receive job-specific training and be able to compete for promotion without having to leave the PSYOP field. Also, they will be competitive with their contemporaries within Career Management Field 96.

Advanced individual training for the new MOS, as well as higher-level skill training, will be conducted at Fort Bragg and at the U.S. Army Intelligence Center and School at Fort Huachuca, Arizona.

A warrant officer program is also being devised to develop PSYOP technicians for the Active Army and the Reserve Components. And modular training (including supervised on-the-job training and correspondence courses) will allow Reserve Component personnel to become MOS-qualified without having to attend resident courses.

Further information on MOS 96F is available from Commander, U.S. Army John F. Kennedy Special Warfare Center, ATTN: ATSU-SI-DT, Fort Bragg, NC 28307; AUTOVON 236-9172, MSG De Waele.





# OFFICERS CAREER NOTES



## PHOTOS SWITCHED

In *INFANTRY*'s November-December 1985 issue, photos of the Infantry Branch team at MILPERCEN appear on page 45. Unfortunately, somewhere in the publication process, two of these photos were switched.

The photo labelled "CPT Dan French" is, in fact, that of CPT Frank Wiercinski, and vice versa.

*INFANTRY* apologizes for the confusion.

## FUNCTIONAL AREA BRANCHES

In response to the revised Officer Personnel Management System (OPMS), a Functional Area Management Branch has been formed in each of the Officer Personnel Management Divisions at MILPERCEN. Each of these branches is responsible for certain functional areas as outlined in *INFANTRY*, November-December 1985, p. 44.

Each officer is invited to call his Functional Area Management Branch for any further information he may need. The following are the AUTOVON telephone numbers for the divisions: Combat Arms Division—221-9846/9623; Combat Support Arms Division—221-0628; Combat Service Support Division—221-8110.

## ACCURATE, POSITIVE FILES

Each promotion list that is released again emphasizes several critical measures an officer must take when he is to be considered for promotion.

Voting members on a centralized DA Selection Board evaluate the file of each officer eligible for consideration. The board file actually consists of the Officer Record Brief (ORB); the performance microfiche containing OERs, AERs, and commendatory and disciplinary informa-

tion; any recent documents not yet converted to microfiche; and the hard-copy official photograph. Selection or non-selection of an officer is based primarily upon an appraisal of his overall performance and potential, but each officer can improve his chances by making sure his file contains the most accurate and positive information available.

The following are some general guidelines for an officer who is eligible for consideration by a promotion board:

- Have a recent high quality official photograph on file in Infantry Branch. This photograph should show current rank, present a neat appearance, and adhere to the requirements of AR 640-30.

- Provide an updated copy of his Officer Record Brief to the appropriate MILPO for forwarding to the board. ORBs are normally mailed to officers being considered by a promotion board 60 to 90 days before the convening date. This ORB must reflect accurate information, emphasizing areas that frequently change, such as assignment history, weight, physical profiles, military education level, civilian education level, and military awards. The officer must sign the "remarks" section confirming the validity of the information.

- Forward critical information, such as completion of non-resident CGSC, to MILPERCEN as far in advance of the convening date as possible to allow timely posting. In cases where a course is completed just before the board is to convene, the officer should provide Infantry Branch with the official date of completion as soon as possible.

In addition, each officer being considered by a selection board has the option of writing a letter to the president of the board, detailing information he feels is pertinent to his official file. This letter will normally accompany the officer's board file and will be seen by each voting member. A letter to the president should be written only when information of true

significance is not already in the board file.

Copies of OERs should not be sent; only the official copies processed by MILPERCEN will be seen by the board.

Selection boards carefully consider the entire file of each officer who is eligible for promotion. Attention to these guidelines will help ensure that the board actually evaluates an officer on the basis of the most timely and positive information.

## INSTRUCTOR VOLUNTEERS

The United States Military Academy routinely needs officers to fill a variety of instructor positions in all academic fields and the military sciences, and positions as tactical officers. Ideally, instructors should include a half and half mix of West Point graduates and ROTC or OCS graduates with varied backgrounds and academic disciplines.

Volunteers for instructor positions must be branch qualified, must have demonstrated outstanding performance within their branch, and must have the capability of obtaining an advanced degree in their particular field of study.

Any officer who is interested in applying for instructor positions should contact both the Academy (AUTOVON 688-3212/3877) and his Infantry Branch assignment officer at MILPERCEN.

Applicants should make sure they have current photos, undergraduate college transcripts, and recent Graduate Record Examination test scores on file at Infantry Branch. Point of contact at Infantry Branch is Captain Dan French — AUTOVON 221-7823/0317.

## FOREIGN AREA OFFICERS

The Foreign Area Officer (FAO) Enhancement Plan is intended to improve the quality of the officers who participate

in the FAO career field. To ensure that officers entering this field have enough time for professional development, those who wish to do so may request this functional area (FA 48) in advance of the normal designation process for their year group.

FA 48 includes positions in which officers can apply regional expertise, language skills, knowledge of U.S. and foreign political-military relationships, and professional military skills and knowledge in key Army and Department of Defense positions.

Training in the FAO program includes the FAO course, language training, graduate schooling, and in-country study. All training is oriented toward the officer's designated geographic area. Possible areas include Africa south of the Sahara, Western Europe, Russia and Eastern Europe, the Middle East and North Africa, Latin America, China, Northeast Asia, South Asia, and Southeast Asia.

All officers interested in participating in the FAO field should submit their applications to U.S. Army MILPERCEN, ATTN: DAPC-OPA-C (MAJ Ken-singer), 200 Stovall St., Alexandria, VA 22332-0400. Applications should include branch qualification, current DLAB score or language proficiency, BA/BS subject area, Graduate Record Examination composite scores, and a priority list of geographic areas of interest.

## **GRADUATE DEGREES**

Many Army officers ask, "Do I need a graduate degree, and if I do, how do I get one?"

The answer is that some specialties and many specific assignments require graduate degrees, especially at the rank of lieutenant colonel and above. Requisitions for officers at MILPERCEN frequently specify graduate degrees for certain functional areas: Comptroller (45), Foreign Area Officer (48), Operations Research/Systems Analysis (49), Research and Development (51), Systems Automation (53), and Procurement (97). Some highly technical areas such as scientific research specify graduate degrees in the hard sciences.

If a graduate degree is in his plans, an officer managed by MILPERCEN may take advantage of several Army-sponsored programs:

**Fully-Funded Advanced Civil Schooling (ACS).** Officers who are available for reassignment during Fiscal Year 1986, are branch qualified, and have strong academic records are encouraged to apply for ACS. Professional competence and previous academic performance are considered in the selection process, and only the best qualified officers are selected. If an officer has been accepted by a highly accredited school before applying, his chances for selection are better.

Interested officers should take the Graduate Record Exam or the Graduate Management Admission Test, then submit applications on DA Form 1618-R with copies of their college transcripts.

After these officers complete their graduate studies, they must serve three years in positions identified for their disciplines and grades by the Army Educational Requirements Board (AERB).

**U.S. Military Academy Instructor Program.** MILPERCEN sends officers to the USMA instructor program, which includes fully-funded ACS and follow-on duty as instructors at West Point. The prerequisites are the same as for any other fully funded ACS. Officers may apply for branch approval for this program at any time.

**Cooperative Degree Program (CO-OP).** The Logistics Executive Development Course (LEDC), Command and General Staff College (CGSC), and Army War College (AWC) have COOP. Under this program, colleges give partial credit toward a graduate degree for completion of particular military schools.

Students in this program may remain on a post or be reassigned to another location to complete the remainder of the degree on a full-time basis, usually six months.

Officers pay all tuition and related costs. The GI Bill or Veterans Educational Assistance Program (VEAP) may be used to fund the education, and the Army pays the permanent change of station (PCS) costs.

Officers can apply for COOP when

they request or are slated for LEDC or resident CGSC or AWC, six to 12 months before the start of the military course.

### **Degree Completion Program (DCP).**

If an officer can be accepted by a school to complete an appropriate degree within about one year, that officer may qualify for DCP. Officers in the program pay all tuition and other related costs. The GI Bill or VEAP may be used to fund the education. The Army pays the PCS costs, but officers who can complete a degree in less than 20 weeks can be authorized permissive temporary duty rather than PCS.

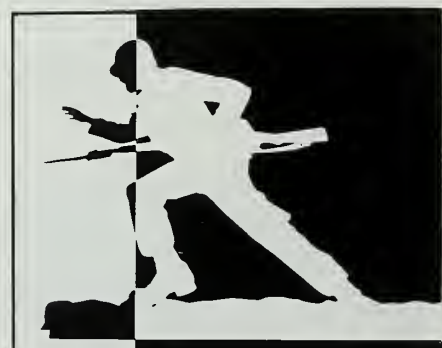
Officers must apply by letter for a DCP. The application must include a letter of acceptance from the school indicating the inclusive dates of attendance.

**Off Duty Schooling.** Most officers who complete graduate degrees do so on their own time.

Assignment officers may be able to help them get assignments that will make it easier to get a degree, such as tours as ROTC instructors. Or an officer may be able to stay where he is for a longer than normal period. The GI Bill, VEAP, or tuition assistance may be used to help fund the education.

Officers should be aware of two provisions when they complete their graduate degrees. When they go to school full time, they must remain on active duty for three times the length of time spent in school, but not more than six years. Those who attend full time for more than 26 weeks are required to complete three-year AERB utilization tours.

Publications that rate graduate programs at colleges and universities can normally be found at public libraries. Local education offices can also provide information for officers interested in graduate degrees.





# BOOK REVIEWS



The Avery Publishing Group (Wayne, New Jersey) has sent us the first two books in its new *West Point Military History Series*:

- **DEFINITIONS AND DOCTRINE OF THE MILITARY ART, PAST AND PRESENT**, by Lieutenant Colonel John I. Alger (1985. 234 Pages. \$18.00, Softbound). The ten chapters of this volume contain definitions or discussions of over 2,500 terms and concepts that are a part of the military vocabulary. Some of the terms can be found in current military doctrine, but some cannot. The author, a former instructor at West Point who is now stationed in the Washington, D.C., area, feels that all of them are important "to the understanding of the military past and present." The first two chapters examine the fundamental principles that underlie the military art. The next seven survey the major periods of military history. The final chapter reviews some of the fundamental concepts and offers a few considerations on future warfare. The publisher claims that this book "is an essential guide for anyone seriously interested in the study of military history." We agree.

- **THE WARS OF NAPOLEON**, by Colonel (Retired) Albert S. Britt III (1985. 204 Pages. \$18.00, Softbound). This is a fine study of Napoleon Bonaparte's attempt to unite all of Europe under his rule. It is, in short, a study of the rise and fall of his "empire," and of the costs to all sides—nearly one million men died in less than 25 years—of his drive for power. The author is also a former instructor at the Military Academy, and in this book discusses not only the battles and campaigns but also Napoleon's generalship and his strategy, and points out that, indeed, the great military leader did have warts.

Both of these books were produced under the general editorship of Colonel (Retired) Thomas E. Griess, who served as head of West Point's history depart-

ment for 14 years.

We have also received a large number of interesting and informative reference books. Here are some of the ones we think all infantrymen should be aware of:

- **WORLD WAR II, THE EUROPEAN AND MEDITERRANEAN THEATERS: AN ANNOTATED BIBLIOGRAPHY**, by Myron J. Smith, Jr. (Garland Publishing Company, 1984. 450 Pages. \$49.00). This is the second in the publisher's series titled *Wars of the United States*. It contains some 3,000 annotated entries that cite English-language books, monographs, articles, official documents, papers, dissertations, theses, and 16mm documentary films. The book is organized in six broad subject areas and then subdivided by subject. It also has author and subject indexes.

- **CAVALRY REGIMENTS OF THE UNITED STATES ARMY**, by James A. Sawicki (Wyvern Publications, 1985. 415 Pages. \$25.00). This is the author's fourth entry into the lineage field. His previous work traced the lineages and honors of our infantry regiments, field artillery battalions (in two volumes), and tank battalions. This one matches his previous attempts on all counts — it is authoritative, complete, factual, and comprehensive, probably the most comprehensive publication of its kind ever to appear in print. The first 149 pages give a historical account of the cavalry from its beginning to the present time. Most of the remainder of the volume documents the history, heraldry, and honors of the 133 regiments of horse, mechanized, air, airmobile, and armored cavalry that have been a part of the United States Army. The book ends with three appendixes, a select bibliography, and an index.

- **RED ARMY ORDER OF BATTLE IN THE GREAT PATRIOTIC WAR, INCLUDING DATA FROM 1919 TO THE PRESENT**, by Albert Z. Conner and Robert G. Poirier (Presidio Press,

1985. 408 Pages. \$22.50). The authors have consulted many primary and secondary sources to detail the combat histories of the fully mobilized Soviet Army. The order of battle itself is arranged in army, corps, and division sections. Each part introduces the type of information and then lists the records of specific units in numerical order. All honors, honorifics, and awards are also shown.

- **HITLER'S LEGIONS: THE GERMAN ORDER OF BATTLE, WORLD WAR II**, by Samuel W. Mitcham, Jr. (Stein and Day, 1985. 540 Pages. \$20.00). The author has written three books on German Field Marshal Erwin Rommel. In this book he gives the organizational and technical aspects of infantry, panzer, panzergrenadier, mountain, airborne, jaeger, and light divisions, as well as security, Luftwaffe field, and Waffen-SS units, and a number of miscellaneous units in the service of Nazi Germany. The book also contains summaries of the important activities of each of the German corps, armies, and army groups.

- **A GUIDE TO THE REGIMENTS AND CORPS OF THE BRITISH ARMY ON THE REGULAR ESTABLISHMENT**, by J. M. Brereton (Merrimack, 1985. 272 Pages. \$16.95). This book presents a complete order of battle of all of the components of today's British Army and traces the parentage of the regiments and corps to their original ancestors. Where applicable, each entry includes the date of raising, successive titles, battle honors, motto, uniform details, regimental marches, regimental journal, regimental headquarters, regimental museum, and nicknames.

- **A DICTIONARY OF EUROPEAN LAND BATTLES FROM THE EARLIEST TIMES TO 1945**, by John Sweetman (Macmillan, 1985. 309 Pages. \$19.95). This is a handy and most useful guide to who fought, won, and lost, and how it all happened in more than 2,400



battles from Marathon in 470 B.C. to Berlin in 1945. The book also includes an index of the battles arranged by the wars in which they occurred, and another index that contains the names of the hundreds of key figures mentioned in the book.

- **GREAT BATTLEFIELDS OF THE WORLD**, by John Macdonald (Macmillan, 1985. 200 Pages. \$35.00). This is a unique and beautiful book in which the publisher uses computer graphics to create two-dimensional maps and three-dimensional graphic models of battlefields on which expert illustrators have overlaid all the details of battle information. These nicely complement the author's narrative, which is highly readable and informative. Thirty battlefields are depicted and the battles on them explained. The book also has biographies of the principal commanders, location maps for each battlefield, and information on how to visit the most accessible sites.

- **THE OXFORD BOOK OF MILITARY ANECDOTES**, edited by Max Hastings (Oxford University Press, 1985. 514 Pages. \$17.95). Here is a collection of vivid accounts of war and warfare culled from a wide variety of sources by a noted war correspondent and military historian. The collection is concerned primarily with British and U.S. conflicts, although other military forces are represented. Max Hastings has tried to emphasize the human experience, and he has succeeded.

- **THE WORLD FACTBOOK 1985** (U.S. Government Printing Office, May 1985. S/N 041-015-00159-1. 274 Pages. 13 Maps. \$14.00, Softbound). Produced annually by the Directorate of Intelligence, Central Intelligence Agency, this factbook includes data on all of the countries of the world. Some of the countries and governments that are included are not fully independent, and others are not officially recognized by the U.S. Government. The individual entries range from "Abu Dhabi" to "West Bank" and "Gaza Strip." Five appendixes and thirteen maps add to the publication's reference value.

- **THE SECRETARIES OF DEFENSE: A BRIEF HISTORY, 1947-1985**, by Roger R. Trask (U.S. Govern-

ment Printing Office, 1985. 75 Pages. S/N 008-001-00147-9. \$3.00, Softbound). The author describes the evolution of the office of U.S. Secretary of Defense and its major activities, policies, and programs through the careers of the 15 men who have served as secretary since 1947. Six appendixes add much other useful material, including a number of organizational charts and a description of the department's seal.

- **MILITARY INTELLIGENCE, THE FIRST HUNDRED YEARS**, by John Patrick Finnegan (U.S. Government Printing Office, 1985. 187 Pages. S/N 008-020-01010-3. \$7.00, Softbound). Last year marked the 100th anniversary of the establishment of military intelligence in the United States Army. This book consists of hundreds of selected photographs to show each of the major intelligence and security disciplines and, at the same time, the continuity of intelligence functions during those years. The selection includes photographs of military and related civilian intelligence operations, POW interrogations during wartime, and cryptographic devices. The text traces the development of military intelligence and its transformation into a recognized professional discipline within the Army. This is an ideal introduction to military intelligence as it was and as it is.

- **ARMY TRIVIA**, by Colonel Edward J. Burke (Quinlan Press, 1985. 182 Pages. \$7.95, Softbound). The author is a serving Army officer and in this book offers a reader several hundred questions dealing with wars, personalities, army lore, photographs, and army history, and several hundred more of a general nature. For example, "What was Operation Bluehearts?" "What was a T-5?" "Name the only two World War II unnumbered divisions." Don't worry, the answers to all of the questions are at the back of the book.

- **FORMATION BADGES OF WORLD WAR II: BRITAIN, COMMONWEALTH, AND EMPIRE**, by Lieutenant Colonel Howard N. Cole (Sterling, 1985. 192 Pages. \$14.95). This book has been recognized as the standard reference on the subject. It first appeared under a different title in 1946, but has been out of print for more than ten years.

It was never published in the United States. The author, for many years the president of the British Military Heraldry Society, describes and illustrates every formation badge and sign involved in World War II — more than 500 all told — and gives the reasons for each design and its adoption. He also lists the details of the different campaigns, theaters of operation, and garrisons in which the formations served. He includes descriptions of a few formation badges from U.S. units and from other Allied forces, a descriptive index of the badges, and an index of formations.

- **U.S. SMALL ARMS OF WORLD WAR II: A GUIDE FOR THE COLLECTOR, SHOOTER, AND HISTORIAN**, by Howard R. Crouch (SCS Publications, 1984. 225 Pages. \$19.50, Softbound). This very useful reference book is divided into three major parts, the first and major one of which is titled "design, battle performance, and collector's data." The second part is aimed at the collector only, while the third part contains some useful reference data and a bibliography. The author has included a discussion of submachine guns, but not of machineguns; he feels collectors should steer clear of them unless they have an important reason for doing otherwise. The book does contain numerous photographs, most of them of great historical interest, and four personal accounts from individuals who were involved either in developing our small arms or in using them in active combat during the war.

Here are a number of our longer reviews:

**GENTLE KNIGHT: THE LIFE AND TIMES OF MAJOR GENERAL EDWIN FORREST HARDING.** By Leslie Anders (The Kent State University Press, 1985. 384 Pages. \$27.50). Reviewed by Colonel Rolfe L. Hillman, Jr., United States Army, Retired.

Here is the career of a capable, ambitious, front-running professional infantryman, a career that spanned his active duty from West Point graduation in 1909 until retirement as a major general in 1946 and on through the gentility of hometown honors and adulation. The shattering World War II climax of Harding's career has been told many times



before; this is the scholarly and engrossing full biography that provides the perspective.

What does the professional infantryman want to make of his years? He learns early that to stay the course he must acquire a proper set of qualifications and experiences. He wants to hit the lists for successive levels of service schooling, and may want to instruct at those same schools. He outdoes himself to give his best for respected seniors, for he wants his capabilities to be recognized and remembered, and that is entirely as it should be. As he rises in rank, he makes every effort to bring near him those junior officers and enlisted soldiers who strike him as "comers." He may also see the professional rewards of writing for publication.

But at the heart of this matter of managing one's own career to the extent possible (and if that's "ticket-punching," so be it), he knows that all is likely to go for naught if he has not checked off command of troops at each level. If he can reach the semi-summit of commanding a combat division, and if he can do it well, he has opened all doors.

Forrest Harding in his early career did all these things, and he did them with a rare depth of intellect and a full-speed personal flair, activating people and events. He held battalion command and related duties in the fabled 15th "Can Do" Infantry Regiment in Tientsin for nearly four years, beginning in November 1923. For more than two of those years he was under the eye of Lieutenant Colonel George C. Marshall, the acting regimental commander.

Harding came back to Benning's advanced course in the summer of 1927 to find the same George Marshall arriving as Assistant Commandant two months later. For about five of the next six years Harding was under the Marshall wing, without doubt having his name added to Marshall's well-known little black book of talented juniors.

He edited the forerunner of *INFANTRY* magazine under the title *The Infantry School News*, put the associated *Infantry School Mailing List* on the professional map, and after graduating from the Army War College in 1934 went on to high acclaim by gaining professional

respect and international note for the *Infantry Journal*, a forerunner of the current *Army* magazine.

The year 1938 found promotions loosening up, and Harding acquired his eagles after 29 years of service. He also received a choice assignment — command of the 27th Infantry Regiment in Hawaii.

Next, the fine hand of George Marshall, who had become Chief of Staff in September 1939, is apparent in Harding's promotion to brigadier general in October 1940. Harding spent an intense year of pre-war training and maneuvers as assistant division commander of the 9th Infantry Division at Fort Bragg and then assumed command of the 32d Infantry Division. His two stars were in place in February 1942, and by mid-May the 32d had closed in Australia. Forrest Harding had arrived at his semi-summit of division command in wartime. (Charles Dickens said it just right: "It was the best of times, it was the worst of times.")

In August 1942, eight months after Pearl Harbor, Marine Corps units began landing on Guadalcanal. The first of the offensives in the south Pacific opened with the September advance of Douglas MacArthur's U.S. Army-Australian Army on Buna, New Guinea — the Papuan campaign. In this arena, in late November and while pushing two of his regiments through a jungle nightmare of ground operations, Harding became the exact focus of MacArthur's displeasure.

It is the central, pulverizing fact of this career and this biography that Harding was forthwith relieved of his hard-won command. In a survey of similar incidents (see *Army*, 1971), historian Martin Blumenson rates the event as "one of the most curious and celebrated incidents, illustrating how the chain of command was bypassed."

Somehow, Anders has avoided what must have been a great urge to make this biography a polemic of defense instead of the full account of a long and useful life. Others have been more blunt and vehement, even if at less length. Anders is objective to the point that a reader can infer some of Harding's vulnerabilities, especially in the retrospective views of some of Harding's peers that he may have lacked a ruthlessness seen as a re-

quirement for combat command, that he may have been too tolerant of poor performance.

Anders concludes, however, that "faced with making his juniors scapegoats or becoming a scapegoat himself, Harding chose the latter and stepped resolutely into the twilight." He believes that any student of the affair "comes away oppressed with the tragic injustices done Forrest Harding and his Red Arrowmen."

The author is a professor of history at Central Missouri State University. He served in a World War II infantry division and has been a historian in the office of the Chief of Engineers. We must be grateful that he has developed Harding's career in such understanding detail. Unfortunately, a reader will find some difficulty in a style that makes it hard to fix a date readily and in a system of footnoting that is downright irritating when he needs to know for sure who said or wrote what. (Another tragic injustice is that the publisher has found it necessary to hang a price of \$27.50 on the book.)

It seems safe to say, though, that a reader will take from this book the impressions that best fit his personal experience and his view of the history of, as Anders puts it, "that 'Old Army' which vanished forever in the thunderous years of World War II."

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**MANEUVER WARFARE HANDBOOK.** By William S. Lind (Westview, 1985. 133 Pages). Reviewed by Captain Thomas M. Jordan, United States Army.

Although written primarily for Marines, this book can also greatly expand a junior Army officer's understanding of the essence of maneuver warfare.

Essentially, William Lind provides valuable insight into the development of maneuver warfare theory. He contrasts maneuver warfare and attrition tactics and further discusses the characteristics of a maneuver-oriented organization. He does this in a crisp, concise style. Much to his credit, he provides historical examples that do much to improve a reader's understanding of what he is trying to say.

Of particular interest to the infantryman is Lind's discussion of the con-



cept of the commander's intent. He correctly views this concept as being the commander's long-term vision of what he wants to have happen to the enemy, or the final result he wants. Lind's discussion of mission orders along with examples not only clarifies the concept but also demonstrates how orders should be communicated.

Lind recognizes the need to train junior leaders in a manner that will enable a unit to conduct maneuver warfare. His suggestions for doing so are valid and unquestionably necessary if we expect to fight according to our AirLand Battle doctrine.

This book is intended to provide a basic understanding of maneuver warfare theory and certain fundamental tactical principles. It certainly accomplishes that purpose. Despite its Marine orientation, Lind's book is recommended to all company and field grade Infantry officers.

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**THE GREAT RIFLE CONTROVERSY: A SEARCH FOR THE ULTIMATE INFANTRY WEAPON FROM WORLD WAR II THROUGH VIETNAM AND BEYOND.** By Edward C. Ezell (Stackpole Books, 1984. 368 Pages. \$29.95). Reviewed by Major C. O. Shanahan, Jr., United States Army, Retired.

The development, adoption, and large-scale fielding of the M1 rifle took almost 17 years, that of the M14 rifle about 16 years, and that of the M16A1 rifle approximately 10 years (although three or four of those years were ones in which the AR15/M16 rifle was in limbo as far as the Army was concerned). If a person wonders why it took so long to develop and field these rifles, Edward Ezell's book will provide most of the answers.

The title of the book could well have been *The Great Rifle Controversies*, because most of the rifles adopted by our Army since World War I have been surrounded by varying degrees of controversy. (The recently developed M16A2 rifle, however, has been relatively free of controversy to this point.)

This book is very informative, well written, and extensively documented. The author is well known in small arms weapons circles as a writer and a

historian. He is eminently qualified to write about military rifles. Ezell details the controversies, failures, frustrations, problems, and successes in the development, management and mismanagement, testing, adoption, and fielding of U.S. military rifles and related items since 1945. For example, the book covers the recent adoption of the 5.56mm squad light machinegun, which is called the SAW (for squad automatic weapon). "SAW" is a euphemism used in an attempt to disguise the fact that the weapon is a belt-fed machinegun and not a magazine-fed automatic rifle.

Of considerable interest, too, is Ezell's account of the 1978-1979 NATO small arms systems trials, which were unique in their scope and conduct in that they consisted of both technical and field testing of a variety of small arms systems. And the results of the ammunition trials had a significant effect on the characteristics of both the M16A2 and the SAW in this country.

In his foreword, Eugene (Gene) Stoner, the designer of the AR15/M16 rifle series, writes that "this book should be required reading for those who make decisions about small caliber weapons development." He points out that the institutional problems that have plagued the development of the M14 and M16 rifles have not been entirely eliminated. This is an understatement.

Stoner goes on to say that "by studying this history we might just be able to keep from making some of the same mistakes over again in the future." The history of small arms development in this country and its current status does not lead one to be overly optimistic about this advice.

This is the best single-volume history of the development of military rifles in this country this reviewer has read. All military and civilian personnel who have responsibility for the development and direction of military small arms projects can profit from studying it. It should also prove of keen interest to the non-professional who is interested in military small arms.

**EDITOR'S NOTE:** *The reviewer was a small arms test officer on the Infantry Board from 1957 to 1961, and a small arms test equipment specialist with the*

*Board from 1965 to 1983. He knew and was associated with many of the personalities and events of the period covered by this book.)*

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**SURRENDER AND SURVIVAL: THE EXPERIENCE OF AMERICAN POWs IN THE PACIFIC, 1941-1945.** By E. Bartlett Kerr (William Morrow, 1985. 356 Pages. \$18.95). Reviewed by Edward J. Drea, U.S. Army Military History Institute.

Few soldiers dwell on the prospect of spending months or years as a prisoner of war. Nevertheless, it is worthwhile for them to have an awareness of how men act and react in extreme circumstances. This book offers such an insight to the conditions of captivity through a general survey of the diverse experiences of U.S. military and civilian personnel who were held as prisoners of war by the Imperial Japanese forces.

The genuine relief that usually accompanies the return of former captives to their homes and families often sweeps aside the harshness of the POW experience. It is sobering, then, to recall the fact that more than 40 percent of all U.S. prisoners of war of the Japanese — 10,650 — never came home.

Although his father died in the Philippines during Japanese captivity, Kerr maintains his impartiality and objectivity when describing the POW experiences. At heart he believes that traditional Japanese frugality and strict adherence to orders were the chief reasons for the squalid prison camp conditions that brought suffering and death to so many Americans. His underlying theme, however, is the inconsistent manner in which the Japanese treated their POWs. One wonders whether this inconsistency resulted from a cultural gulf, an individual aberration, or an expression of the contradictions of Japanese interacting with non-Japanese.

Kerr's survey tells the reader what happened, but not why it happened. Why, for instance, did one Japanese officer behead American prisoners while another, for a more serious offense, simply reduced their rations?

This book provides a place to begin to



answer such questions. Surely this generally well-written overview is a testament to the incredible resilience of the human spirit to endure and survive the worst indignities that other men can inflict. On the darker side, it is still worth asking today why those other men were capable of committing those atrocities.

---

**MOUNTAIN WARFARE IN EUROPE.** By Gerhard Schepe (National Security Series No. 2/83. Center for International Relations, Queen's University, Kingston, Canada, 1983. 101 Pages). Reviewed by Major Scott R. McMichael, Combat Studies Institute, USACGSC.

The author of this study, Major Gerhard Schepe, has served eleven years with the 1st German Mountain Division. He wrote this study while assigned from 1982-1983 as a Visiting Defense Fellow at the Center for International Relations at Canada's Queen's University. Thus, he has been able to couple personal experience with scholarly research into mountain warfare.

Schepe observes early in his study that mountain warfare is of relatively recent vintage, and that except for Hannibal's crossing of the Alps in 218 B.C., no significant military operation in mountains occurred in Europe until the 18th century. The Soviet invasion of

Afghanistan has served to renew interest in this field of operation.

The author describes the basic influences of terrain, climate, and weather on mountain warfare, dwelling on Clausewitz's determination that a strategic defense based in the mountains is likely to suffer defeat because of the lack of defensive mobility. Schepe notes, though, that the modern helicopter has altered the picture substantially, perhaps nullifying Clausewitz's objection. In fact, Schepe devotes an entire chapter to the use of helicopters in mountain warfare.

In his conclusions, Schepe makes several important points. He feels that in NATO's overall theater strategy, mountain operations as such occupy a relatively minor role. Nevertheless, he is concerned about the lack of a common European theory of mountain warfare. To Schepe, the helicopter increases the pace, scope, depth, and defensive value of mountain operations, from which he determines that airmobile forces are best used in mountains.

As in any short work, there are a number of gaps. For example, there is no mention of the use of pack trains or of the important issue of mountain logistics. Still, given its modest length and limited scope, it can serve as a fine primer on the subject and is an excellent place to begin a further investigation into mountain warfare.

U.S. Army personnel who might find themselves committed to mountain operations would do well to devote the time needed to digest this excellent study.

---

**CASSINO, THE HOLLOW VICTORY.** By John Ellis (McGraw-Hill, 1984. 478 Pages. \$19.95).

**MONTE CASSINO.** By David Hapgood and David Richardson (Congdon and Weed, 1984. 244 Pages. \$17.95).

Both books reviewed by Captain Anthony R. Garrett, United States Army.

As the Italian campaign of World War II receives increased attention, it is only natural that the struggle for Monte Cassino should come to epitomize the entire campaign.

In his book, John Ellis effectively analyzes the major battles of the campaign that culminated in the capture of Rome by the U.S. Fifth Army. He develops the personalities of the main Allied commanders — Clark, Alexander, Juin, and Freyberg — and points out that the Allied peculiarities and indecisions resulted in a considerable amount of frustration for the subordinate commanders and soldiers.

Ellis, a British author, narrates each separate battle and uses interviews and personal diaries to illustrate the futility and the errors that plagued the campaign. He also addresses in detail the



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## BOOK REVIEWS

geographical obstacles that proved to be more formidable than the German defenders, and how the Allied commanders at all levels often failed to consider the terrain when they planned their operations.

The book by David Hapgood and David Richardson is far different in approach. Their main story revolves around the events that led to the Allied decision to bomb the Benedictine Abbey of Monte Cassino. While not addressing the tactical situation in detail, the authors do raise certain questions about the need for bombing the Abbey.

The authors tell their story effectively and with enough suspense to hold the reader's interest. Unfortunately for U.S. and British readers, the most sympathetic characters in the book are the Germans whose initiative saved many priceless artistic treasures from the bombing.

### RECENT AND RECOMMENDED

**BRENNAN'S WAR: VIETNAM, 1965-69.** By Matthew Brennan. Presidio Press, 1985. 275 Pages. \$17.95.

**INDIA: LABYRINTHS IN THE LOTUS LAND.** By Sasthi Brata. Morrow, 1985. 336 Pages. \$19.95.

**FRENCH FOREIGN LEGION PARATROOPS.** By Martin Windrow and Wayne Braby. Illustrated by Kevin Lyles. Elite Series 6. Osprey, 1985. 64 Pages. \$9.95, Softbound.

**SOVIET BLOC ELITE FORCES.** By Steven J. Zaloga. Illustrated by Ron Volstad. Elite Series

5. Osprey, 1985. 64 Pages. \$9.95, Softbound.  
**AFRIKA KORPS.** By George Balin. Tanks Illustrated 17. Sterling, 1985. 64 Pages. \$5.95, Softbound.

**OPERATION BARBAROSSA.** By Steven J. Zaloga and James Grandsen. Sterling, 1985. Tanks Illustrated 16. 64 Pages. \$5.95, Softbound.  
**SOVIET ARMY UNIFORMS IN WORLD WAR II.** By Steven J. Zaloga. Uniforms Illustrated 9. Sterling, 1985. 64 Pages. \$5.95, Softbound.

**ARMIES IN LEBANON, 1982-84.** By Samuel M. Katz and Lee E. Russell. Color Plates by Ron Volstad. Men-at-Arms Series 165. Osprey, 1985. 48 Pages. \$7.95, Softbound.

**THE AMERICANS PLAINS INDIANS.** By Jason Hook. Color Plates by Richard Hook. Men-at-Arms Series 163. Osprey, 1985. 48 Pages. \$7.95, Softbound.

**PRUSSIAN CAVALRY OF THE NAPOLEONIC WARS (I): 1792-1807.** By Peter Hofschroer. Color Plates by Bryan Fosten. Men-at-Arms Series 162. Osprey, 1985. 48 Pages. \$7.95, Softbound.

**THE CANADIAN ARMY AT WAR.** Text and color plates by Mike Chappell. Men-at-Arms Series 164. Osprey, 1985. 48 Pages. \$7.95, Softbound.

**UNIFORMS OF THE AMERICAN CIVIL WAR.** By Philip Haythornthwaite. Illustrated by Michael Chappell. Blandford Color Series. Sterling, 1985. 192 Pages. \$6.95, Softbound.

**UNIFORMS OF THE NAPOLEONIC WARS, 1796-1814.** By Philip J. Haythornthwaite. Illustrated by Jack Cassin-Scott. Blandford Color Series. Sterling, 1985. 195 Pages. \$12.95.

**UNIFORMS OF THE AMERICAN REVOLUTION.** By John Mollo. Illustrated by Malcolm

McGregor. Blandford Color Series. Sterling, 1985. 228 Pages. \$6.95, Softbound.

**UNIFORMS OF THE SOLDIERS OF FORTUNE.** By Leroy Thompson. Illustrated by Ken MacSwan. Blandford Color Series. Sterling, 1985. 159 Pages. \$12.95.

**THE SOVIET UNION: WHAT LIES AHEAD? MILITARY-POLITICAL AFFAIRS IN THE 1980s.** Edited by Major Kenneth M. Currie and Major Gregory Varhall. Published under the auspices of the United States Air Force. Government Printing Office, 1985. S/N 008-070-00559-0. 800 Pages. \$18.00, Softbound.

**THE UNITED STATES AIR FORCE IN SOUTHEAST ASIA, 1961-1973: AN ILLUSTRATED ACCOUNT.** Edited by Carl Berger. Government Printing Office, 1984. S/N 008-070-00516-6. 408 Pages. \$14.00.

**MILITARY.** A magazine published monthly by the MHR Publishing Corporation, 2122 28th Street, Sacramento, CA 95818. \$10.00 for one year.

**1985-86 CONGRESSIONAL DIRECTORY.** Government Printing Office, 1985. S/N 052-070-05994-0. \$13.00, Softbound.

**THE EFFECTS OF NUCLEAR WEAPONS.** Edited by Samuel Glasstone and Philip J. Dolan. 1984 Reprint of 1977 Edition. Government Printing Office, 1984. S/N 008-046-00093-0. 668 Pages. \$17.00

**TREATIES IN FORCE.** U.S. Department of State. Government Printing Office, 1985. S/N 004-000-02048-3. 352 Pages. \$9.00, Softbound.

**CRUSADE IN NUREMBERG: MILITARY OCCUPATION, 1945-1949.** By Boyd L. Dastrup. Contributions in Military History 47. Greenwood Press, 1985. 159 Pages. \$27.50.

**POLAND IN THE SECOND WORLD WAR.** By Jozef Garlinski. Hippocrene Books, 1985. 387 Pages. \$25.00.

**THE HORSEMEN OF THE STEPPES.** By Albert Seaton. Hippocrene Books, 1985. 251 Pages. \$22.50.

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# **From The Editor**

## **1986 INFANTRY CONFERENCE**

**The 1986 Infantry Conference will be held at Fort Benning during the period 8-10 April 1986. All members of the Infantry Association are invited to attend. Many of the sessions will be open to all attendees, and there will be enough space at these open sessions to accommodate all who want to attend them. A formal agenda is now being developed.**

**Infantry Association members who would like to come to the Conference are asked to contact the editor of INFANTRY as soon as possible. They will be sent copies of the formal agenda (when it is available) and information on housing, as well as other general information.**

## **SWAP SHOP**

**Some years ago — in the late 1960s — a popular feature in INFANTRY was the Doughboy Swap Shop, through which infantrymen everywhere shared practical ideas that they had used successfully in doing their jobs.**

**With this issue, we are reviving this idea and calling it, simply, Swap Shop (see pages 11 and 26). These short items will be used as fillers whenever we have room for them — or occasionally we may have to make room for one.**

**If you have an idea you want to share with your fellow infantrymen, send it in. And if you need a good idea, this may be the place to watch for one.**

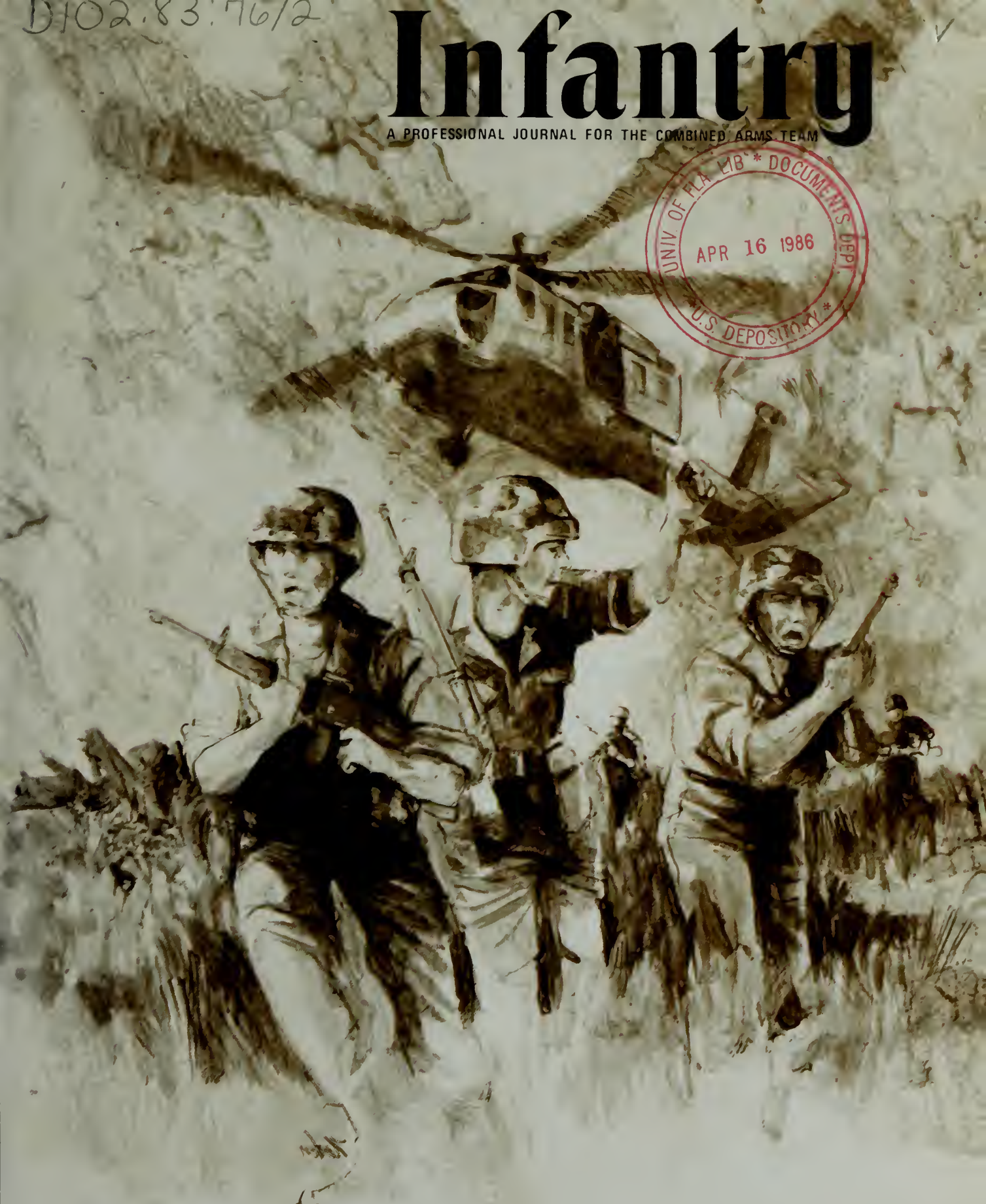




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Infantry leaders need to think about how they will fight and, accordingly, about how they will train to fight.





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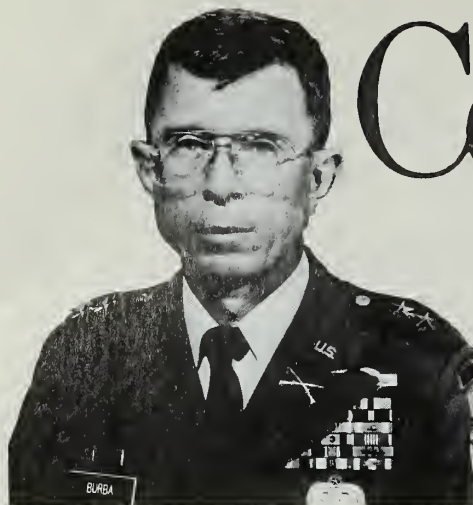
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# Commandant's NOTE



**Major General Edwin H. Burba, Jr.**  
Chief of Infantry

For my first note as Commandant of the Infantry School, I think it will be useful to review what each of the School's departments and directorates has been doing and continues to do. First, though, let me discuss some initiatives that cut across all of them.

The most satisfying trend in the past two years has been the influx of high-quality officers and NCOs to School assignments, and this trend continues. This summer alone, the School will receive five Army War College graduates, a brigade commander, and 14 battalion commanders, as well as a host of Command and General Staff College graduates. A similar picture can be painted on the NCO side, where we are raising the instructor qualifications for our Advanced Noncommissioned Officer Course (ANCOC), Basic Noncommissioned Officer Course (BNCOC), and Primary Leadership Development Course (PLDC) classes. In the near future, for example, all of the NCO tactics instructors for our ANCOC classes will be sergeants first class who have served with distinction as platoon sergeants, who have been thoroughly prepared in the NCOES process, and who are themselves graduates of the course. We are also raising the experience level of the NCOs who present our BNCOC and PLDC instruction. These NCOs are all graduates of the courses they teach, and most of the instructors from the combat arms have served as squad leaders or assistant platoon sergeants.

At the same time, our officer and NCO board selection rates have been quite good. This shows us that our "schoolhouse" is again considered an attractive place to serve.

Our instructional focus has been on hands-on performance-oriented field training conducted with small groups. More and more instruction—even leadership training, and other so-called soft skills—has been moved out of the classroom and into the field. The mentoring concept is now being used in our Infantry Officer Advanced Course (IOAC) classes and will eventually spread to our other courses as well. Certification is another key initiative with its hallmark being found principally in the Maintenance Management Division of the 29th Infantry Regiment/Weapons Department (automotive, weapons, communications, and NBC).

In the area of doctrine, our intent is to formulate fewer but higher quality products. Our focus is on putting the essence of a subject into a manual and reducing boilerplate and volume. We are looking at stan-

dardized task training products and at flexible, high initiative tactical products. Translating all of our doctrinal products into AirLand Battle formats is keeping us busy, but we are meeting the time lines.

In the past 18 months, we have produced more than 20 field manuals and circulars. (Make sure your units are getting them.) Among these are FM 7-7, The Mechanized Infantry Platoon and Squad (APC) (March 1985); FM 7-90, Tactical Employment of Mortars (June 1985); FC 71-6, Battalion and Brigade Command and Control (March 1985); FC 7-7J, The Mechanized Infantry Platoon and Squad (Bradley) (April 1985); FC 7-12, The Infantry Company Fighting in Mountains (June 1985); and FC 7-90-1, Tactical Employment of the 60mm Mortar Section (December 1985).

In combat developments, our eyes are on the critical requirements. We have mobilized all our resources to concentrate on one item at a time, and this is paying off, because after ten years, several weapon programs finally survived funding cuts this past year—a Dragon replacement, an interim Dragon improvement, two TOW product improvements, a follow-on TOW, mortars, and a new bayonet.

Now let's take a look at our departments and directorates individually.

## COMBINED ARMS AND TACTICS

A mentor program for all IOAC classes has been instituted. Each class is divided into 20-man groups for the 13 weeks of tactics instruction, and a full-time mentor is assigned to each group to present that instruction. This departure from the committee method of instruction, together with an increase in the number of hours devoted to field training and a return to subjective grading, will produce graduates who are much better prepared as maneuver warriors well versed in AirLand Battle doctrine. We have also integrated all aspects of combined arms operations—fire support coordination, tactical communications, mobility and counter-mobility, and the like—into these classes.

Additionally, we have restructured all ANCOC instruction so that its emphasis is now on the application of doctrine and not on the mere teaching of it.

The School has started a program of instruction to support the new Army writing style and is conducting classes in that style in all of its



officer and noncommissioned officer career courses. We are emphasizing effective military writing, not grammar.

### TRAINING AND DOCTRINE

During the past year, major study efforts have been undertaken on basic and advanced rifle marksmanship training, including evaluating known distance firing and establishing tougher qualification standards. Programs to improve marksmanship training in the institution and the field will be on the streets soon.

The School has developed a training strategy for the cadre of COHORT units that includes a resident training course at the School as well as exportable training support packages. An analysis is now being run to see if the Army can afford the strategy.

Bradley and Mortar Gowen South studies were conducted to test the training effectiveness and the resource requirements of alternate BFV and mortar training programs, including training devices.

Major revisions of all the courses taught at the School have been completed, and programs of instruction for training Air Force Security Police have been developed. Other new programs of instruction developed in the past year or so include a LRSU POI, an infantry reserve officer professional update program, a sniper instruction POI, and a master marksman POI.

The Expert Infantryman Badge test has been revised and incorporated into DA Circular 350-85-3. In addition, 1986 military qualification standard (MQS) manuals for pre-commissioning programs and for infantry lieutenants have been either developed or revised, and field validations of the infantry captains manual have been conducted.

A training strategy for MOUT training has resulted in a MOUT training circular that will be distributed during Fiscal Year 1986. We are making an intensive effort in this area, and you will hear more on it in the future.

### 29TH INFANTRY REGIMENT/WEAPONS

The 1st Battalion has consolidated its battalion-level maintenance support and refined its methods of instruction to conduct mentorship training where it can.

The 2d Battalion implemented a new basic rifle marksmanship program, introduced infiltration training, began SAW instruction, and prepared a master marksman course.

The maintenance management division has trained ten IOBC classes, five IOAC classes, five ANCOC classes, and four infantry PCC classes. With time, we should be able to make a big dent in our maintenance vulnerabilities, about which many of our commanders talk and write.

### COMBAT DEVELOPMENTS

The Infantry School continues comprehensive programs to develop clothing and equipment, antiarmor systems, mortars, small arms, directed energy weapons, night vision devices, and all proponent infantry vehicles. Major emphasis has again been directed toward developing a medium antiarmor system. Since the program has been funded at DA, we are now optimistic about finally being able to replace the Dragon with a highly lethal, very trainable system.

Operational and organizational plans have been developed for such items as a close combat laser countermeasure system, a light mobile robotics system, a light anti-optics weapon system, a new sniper rifle, a multipurpose bayonet, and a battalion-operated surveillance system.

Infantry requirements have been identified for a family of armored vehicles, the future infantry fighting vehicle family, and a shoulder-launched multipurpose assault weapon, while a front-end analysis of light infantry capabilities and limitations has been performed in conjunction with the 7th Infantry Division.

TOE documents have been completed for airborne infantry and Ranger battalion units using Army of Excellence initiatives under the documentation modernization program directed by the Vice Chief of Staff of the Army. In addition, living TOEs for mechanized and heavy separate infantry brigades will be published in October 1986.

Initial design actions have also been completed for the development of a unique TOE document for the 6th Infantry Division, the Alaskan Defense Division. If all goes according to plan, this document will be published in October 1986. We have constant dialogue with the field and are working hard making fixes on current TOEs that are troubling our field units.

### RESEARCH AND ANALYSIS

This directorate is developing a prototype mechanized infantry task force ARTEP mission training plan (AMTP). It will focus on analyzing missions to determine the underlying tasks and on developing training plans to carry out the tasks rather than the missions. This AMTP (71-2J) should be in the field by the third quarter of Fiscal Year 1986. It will give us a more precise training document but one that is far less voluminous and far more simple to execute.

### INFANTRY PROPONENCY

Action has been taken to upgrade the experience level of MOS 11C soldiers in our heavy mortar platoons. The platoon sergeant's position now calls for a master sergeant, the section leader's for a sergeant first class, and the chief computer's for a staff sergeant.

Action has also been taken to recode the infantry immaterial positions in TDAs to balance the understructured MOSs 11C and 11H by shifting to them such TDA positions as land navigation, leadership, rifle marksmanship instructors, and operations sergeants from 11B. These initiatives will improve the experience level in our mortar sections and allow much more favorable career development, including promotion rates.

An updated DA Pamphlet 600-3, Commissioned Officer Professional Development and Utilization, will be published in April 1986. It will emphasize the influence light infantry and Ranger units have had on the accomplishment of the Infantry's mission and the need for company grade officers to serve in both mechanized and light infantry units to improve their cross-training experience.

Action has begun for coding as Ranger positions certain selected positions in both light and heavy infantry units (primarily at the platoon leader level) to provide Ranger-trained and experienced leaders in those units at the small unit level. Certain other selected positions will be coded as Pathfinder because of the increased emphasis the Army is now placing on air assault and aerial resupply operations. Pathfinder duty will be an additional duty for the coded positions.

ST 71-1, Infantry Professional Development, is currently under revision with a projected print date of May 1986. This text provides the enlisted soldier with information that is relevant to his professional development and tells him of assignment considerations.

### EVALUATION AND STANDARDIZATION

Two separate efforts—an ITV training evaluation and an ITV maintenance evaluation—were conducted to keep the Infantry School abreast of the training and maintenance of this critical war-fighting system. The results portray in general a well-trained ITV force but one that is lacking in maintenance expertise. Efforts are under way to correct this.

Infantry Liaison Teams (ILTs) continue to visit units throughout the world. ILTs help units solve training problems in matters for which the School is the proponent, and also help the units apply the School's

training products to the units' training programs along with the BTMS. The ILTs also function as the School's external feedback system. If you need a team's help in your unit before one is scheduled to visit, please let us know.

#### LIGHT INFANTRY TASK FORCE

During the past year, the Infantry School has continued to support the implementation and sustainment of a training strategy for the light infantry divisions. Field Circular 7-14, Light Infantry Company Operations and ARTEP Mission Training Plan, was published in February 1985, and the final draft of Field Circular 7-13, Light Infantry Battalion and Brigade Operations and Battalion ARTEP Mission Training Plan, was completed in November 1985.

During Fiscal Years 1986 and 1987, these light infantry field circulars will be converted into field manuals and AMTPs.

Special courses have been developed by the Infantry School for soldiers and leaders in the light infantry divisions and distributed to other service schools to help them develop their own programs.

The certification of the light infantry concept, currently in Phase II, is expected to be completed by the end of the present fiscal year.

#### THE SCHOOL BRIGADE

The Tactical Leadership Course (TLC) is a recent addition to the IOBC and ANCOC POIs. The drill-based TLC, which is intended to train platoon-level leaders in critical combat skills, is conducted in the field under stressful, simulated combat conditions. The course is now being packaged to export to units outside of Fort Benning.

In response to certain perceptions from the field that many infantrymen are weak in land navigation, a program is under way at the School to upgrade its land navigation training. The School is now using competitive orienteering as a training vehicle to improve its students' terrain association skills.

Mentorship has begun in all aspects of the IOBC program. Each IOBC company is commanded by a major; he is assisted by senior platoon trainers who are captains who have commanded companies. These officers serve as role models for the young lieutenants in the course. In addition, each platoon has two Ranger-qualified noncommissioned officer trainers who are either staff sergeants or sergeants first class. Seven of the course's 16 weeks are spent in the field. More than 75 percent of the instruction is conducted by the cadre of the 2d Training Battalion. As you can see, committee instruction is becoming a thing of the past at the Infantry School.

#### RANGER

The Ranger Department graduated 1,893 Rangers in Fiscal Year 1985, the largest number—by 461—to earn the Ranger tab in any one year in the 35-year history of the Ranger course. The training load for Fiscal Year 1987 will increase from 2,100 to 3,080 to meet the needs of the light divisions entering the force structure, of the additional Ranger battalion, and the Ranger regimental headquarters. I will guarantee you, though, that this is being accomplished without reducing standards.

Leaders from 17 battalions or battalion equivalents have been trained in the Light Leader Course. These personnel came from the 7th Infantry Division, the 25th Infantry Division, the 10th Mountain Division, and the 29th Infantry Division (National Guard). Leaders from 14 other battalions will be trained during Fiscal Year 1986, with the Department using a double-run concept.

Leaders from corps LRSU companies and division LRSU detachments will be trained by the Ranger Department in a five-week course that will begin in October 1986 (if the instructors arrive in time). Nine such training courses are programmed for Fiscal Year 1987.

#### SECRETARY

Within the School library, a number of changes have taken place. An antiterrorism orientation room has been opened, a military history room is being developed and should be completed by early spring, and a student and faculty area has been set up on the mezzanine level where users can leave their research materials for a number of weeks.

The Allied Student Training Detachment handled more students during Fiscal Year 1985 than it has ever handled—more than 700 students from 84 different countries. The School and ASTD combined efforts to host a very successful TRADOC Allied Training Officer conference during a three-day period in September 1985.

The Infantry School is a busy place these days and all of us here are dedicated to turning out the world's finest infantrymen. More than that, as you can see from the above, we have initiated a number of innovative programs, the results of which will have a tremendous effect on all of our infantrymen and infantry units throughout the world.

The School has not worked in a vacuum, but has counted on your ideas, suggestions, and feedback to help it reach its immediate goals. In the months ahead, I look forward to continuing that dialogue, for I know that with all of us pulling together, we can do much to maintain the United States Infantry as the best in the world.





# INFANTRY LETTERS



## ESSENTIAL DIFFERENCES

The article "Dismounted Night Attack," by Lieutenant Colonel William A. DePalo, Jr., (September-October 1985, p. 26) raises some important issues that should be examined closely. What he has done is a classic case of deductive reasoning, going from the specific to the general, using only one example to support his conclusion.

In this case he has taken the results of a dismounted night attack during REFORGER 85 and deduced from it that "the unsupported, nonilluminated, dismounted night attack remains a highly effective and desirable part of our offensive doctrine," and further that "there is no reason, therefore, to believe that only special operations forces can conduct dismounted night attacks." He says, "The mechanized infantryman, if he is well prepared to do so, can also . . . conduct successful night attacks."

It has long been accepted that one of the most important ways to prepare for future encounters is to use the results of past encounters. But maybe the most important point for the would-be user of past examples to remember is that only insofar as one can count on the essential conditions of a given situation remaining the same can one count on essentially the same outcome. As Sir Julian Corbett, a noted British military and naval historian wrote, "The value of history in the art of war is not only to elucidate the resemblance of past and present, but also their essential differences."

With that in mind, we would like to look at the essential circumstances that contributed to the success of Colonel DePalo's attack.

He says, "Through stealth, [the dismounted infantryman] can move over virtually any kind of terrain, maneuver around choke points, and, in many instances, walk onto an objective undiscovered and therefore unopposed."

The attack itself was successful in that "all elements had crossed [the river] undetected and regrouped to begin infiltrating the objective." Further on, he states that "night is the ally of the infantryman and negates many of the advantages enjoyed by a defender who occupies good defensive terrain and has sophisticated optics and weapon systems."

The implication of all this is that his battalion slipped past the defenders totally undetected, except for "a single brief interruption when an enemy machinegun opened fire on the right flank company."

That is his side of the story.

We were the squadron commander and the S-3 of the unit that faced him, and we have a slightly different view of the battle (not surprising, since opposing forces often have completely different views of the battle). Let's look at an interpretation of these events from our side and see if some unique circumstances may have contributed to his success—essential circumstances that may or may not be transferable to future battles.

For starters, however, his units were not "undetected." They were seen even before midnight by line crossing patrols from the blue side (even though these were against the rules, as was his scout screen). They were further picked up in the thermal sights of both the M1 tanks and the M901 ITVs, both of which were deployed well forward. The patrols were tracked even before they approached the line of departure. So stealth did not contribute to their success, but, as Colonel DePalo states, they did manage to seize their objective. How?

The first essential circumstance that allowed this success, even though detected, was REFORGER artillery play. We have been on more than a dozen REFORGERs over the past ten years and can tell you that artillery is virtually worthless to the tactical commander in these exercises. This is because the cumbersome system used to allocate

credit for artillery is unworkable. Many commanders stop using artillery because they know they will never get credit for it, and there are other things they can do with their time.

Did we call for artillery on these dismounted patrols? Yes, almost 100 calls for fire directed against them were sent to the DS 155mm battalion that was supporting our squadron. Our maneuver umpires (who normally do not give credit for artillery, as only artillery umpires are supposed to do this, according to the REFORGER umpire book) declared that the patrols would have been devastated by all of this artillery. They tried to give credit, but the results were insignificant.

The second essential circumstance made the little credit that was given worthless to us.

During REFORGER, casualties on the attacking side came back to life after two hours while casualties for the defenders came back after four hours. Not only did they come back to life, they were allowed to continue on with their patrol, even while "dead." Thus, the patrol leader could afford to completely disregard artillery. Since he wasn't attacking anything, merely infiltrating, he didn't need any combat power to continue, and the loss of men was insignificant.

Why didn't we maneuver to counter the dismounted patrols? Simple! For safety reasons, no mounted night tactical maneuver was allowed. Thus the tracked vehicles of the covering force were also ineffective. Also, the covering force vehicles were not issued any blank ammunition, so even this was not played. (Whoever "fired" on the right flank company must have been from the attacking battalion's own scout forces; it wasn't any of the covering force units.)

Could one, then, count this night dismounted infantry attack a success? Absolutely! It was a classic example of gamesmanship. It was a brilliant use of the quirks of REFORGER to gain a tac-



tical advantage. There is nothing wrong with this. We have been challenged over and over to break out of the conventional mode of thinking and to look for innovative solutions to problems. The night dismounted attack took advantage of several inherent limitations in REFORGER tactical play and made the most of them.

This is normal during REFORGER. REFORGER attacks by armor and mechanized infantry units are characterized by pressing the attack at all costs and concentrating lots of units in one small area—with attacking units coming back to life in two hours and the defenders in four hours, it doesn't take long for an attacking force to build up an overwhelming advantage. There is no free maneuver during REFORGER because of maneuver damage limitation. Tracked vehicles are essentially road and trail bound.

What does all this have to do with the dismounted infantry attack? Just this. REFORGER is not the place to either argue or develop *tactics*. It is a great test of logistics and command and control at the battalion level. It may also be a good test of operational level skills. But the one thing it is not is a good test of tactics. And that is because the essential circumstances of combat are not there.

If Colonel DePalo expects to fight a mechanized unit with no night sights, ineffective artillery, and no ammunition and one that cannot or will not maneuver at night, and if he expects that his casualties will move while dead and come back to life in two hours, then maybe he can use this particular example as one on which to base his future plans. We hope, for the sake of his soldiers, that he does not.

None of this invalidates a night dismounted infantry attack—not even a night dismounted attack against a mechanized force. But neither can this particular exercise be used to validate any tactical doctrine. It is therefore ludicrous to use this example to bolster the argument for night dismounted attack.

Using historical examples is a time-honored means of preparing for the next war. But there are as many cases of nations and individuals using the wrong lessons as there are of using the right ones. The key is to make sure that one

uses situations that approximate, *in their critical circumstances*, the situation one is trying to prepare for. And we don't really think Colonel DePalo has done this.

No one is faulting his soldiers for their admittedly magnificent physical feat. But at the same time, that feat bore little relation to the kind of battle we expect to fight in Europe, and to say that it does is to do a disservice to the Army, but most especially to the dismounted infantryman.

GEORGE K. CROCKER  
LTC, Armor

CLINTON J. ANCKER, III  
MAJ, Armor  
3d Squadron, 11th Armored  
Cavalry Regiment

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## MORE ON NIGHT ATTACK

I concur with the theory behind Lieutenant Colonel William A. DePalo, Jr.'s article "Dismounted Night Attack." Since I was an umpire during this operation of the 1st Battalion, 10th Infantry, I would like to make some comments about it.

During a REFORGER exercise, a mechanized infantry battalion is held to the constraints of the exercise, one of which limits tracked movement during hours of darkness. Umpires, controllers, and commanders must coordinate and plan so as not to allow the control restrictions to become tactical distractions. To control the battle and calculate the odds, each umpire must know the details of the maneuver commander's intent, and during this particular exercise better communications would have helped.

To reinforce Colonel DePalo's intentions, I recommend a closer look at the capabilities of the mechanized infantry. Its combat power can be increased if forces are concentrated toward the main effort of an attack. Such a course of action would have improved this battalion's ability to sustain the effort of the division and may have allowed the attack to continue into the main battle area. But a main

attack was not included in the battalion's plans.

The battalion compromised its mobility when the drivers and track commanders were removed from their vehicles and ordered to contribute to the dismounted attack. Carrier teams, tanks, and TOWs could have been tasked with reinforcing the main attack or with providing continuous support by overwatching the dismounted element. Then the M113 armored personnel carriers could have carried the 60-pound rucksacks for the dismounted elements, leaving the soldiers with only the weapon systems required to complete the mission. A planned link-up operation using control measures would have made it easier to consolidate later and rejoin the dismounted elements with their tracks.

In this particular battle, trucks were used incorrectly and inefficiently. Wheeled vehicles carrying light infantry to a secured dismount point previously seized by a scout section or by the lead element of a maneuver unit would have served the effort more effectively. This technique would have allowed a more efficient use of both men and equipment, and the force would have had stronger soldiers ready to fight, instead of soldiers who had just walked 14 miles in a foot of snow. Selected tracks could have been used to carry mission-essential equipment and to help distribute the logistical needs of the battalion.

One simple control measure would have been to have TOWs move into overwatch and 107mm mortars support the forward elements' movement to the river. When the dismounted units reached the river, the TOWs would have moved forward to overwatch, the tracks would have moved forward with rubber boats, and the trucks would have been prepared to resupply the effort.

The battalion's mission was to penetrate the enemy's covering force. Analyzing the operation, I consider it to have been a successful infiltration but not a successful attack. Bypassing the enemy's covering force supported the principles of infiltration, while a penetration is designed to destroy the enemy force and with it the coherence of the defense.

The infantry should always train for



dismounted night attack, which is the most effective operation for disrupting the enemy's defensive plan. By combining the audacity of the dismounted soldier with the mobility of the mechanized infantry, we can destroy the coherence of an enemy's defense.

PAUL J. CANCELLIERE  
CPT, Infantry  
Fort Benning, Georgia

## FOG BOUND

Your excellent magazine is read with great interest by all members of the British Army Staff in Washington and elsewhere in the United States and the United Kingdom.

I was interested to see in the INFANTRY News section an item about the Abrams M1A1 (November-December, p. 9). It is undoubtedly a superb tank, and I very much look forward to seeing it "in the flesh."

I would, however, like to comment on the final paragraph of that item, which claims that "The tank's thermal imaging and laser sighting systems enable the gunner to fire accurately through dense fog, smoke, or dust while the tank is traveling at combat speeds."

Excellent though the thermal imager and laser rangefinder may be, they will *not* operate through *dense* fog, thermal screening smoke, heavy fuel smoke, or thick dust clouds.

Water droplets and water vapor severely degrade the performance of thermal imagers and lasers. In light mist, fog, or rain, they will continue to operate but at reduced ranges and with less definition. In heavy rain thermal contrasts are drastically reduced and it becomes very difficult to distinguish targets from their backgrounds, except at very short ranges. In dense fog, thermal imagers and lasers "penetrate" little better than the human eye or a vehicle headlamp. Thermal imagers will, as claimed, operate through conventional smoke as though it did not exist, but some *lasers* will be defeated by the same smoke. These are mainly neodymium yag lasers, which comprise the majority of the lasers in military service throughout the world.

The M1A1 will, of course, have a CO<sub>2</sub> laser that *can* penetrate conventional smoke and can therefore be operated with thermal imagers. However, *thermal*-screening smokes are being developed, and some heavy fuel smokes currently used by Warsaw Pact forces may often "blind" thermal imagers and lasers. Dust can also have a "blinding" effect, but much depends on the size of the dust particles and the thickness of the dust cloud or screen.

These comments are in no way intended as a criticism of the excellent M1A1 tank, but I am sure you will agree that it is very important that soldiers be well aware of both the capabilities and the limitations of the equipment they use. They should certainly not *overestimate* those capabilities.

JOHN BOLTON-CLARK  
Lt.Col., Royal Artillery  
British Embassy  
Washington, D.C.

## JUST ONE

In reference to the article by Colonel Huba Wass de Czege, "Three Kinds of Infantry," in your July-August 1985 issue (and the response by Major R. McMichael in the November-December 1985 issue), I would like to offer the following views.

I personally believe that there are not three different kinds of infantry and that there is no need for three. There is only one type of infantryman, and he is employed differently in different scenarios and units.

Arming the "armored infantry" with submachineguns accomplishes one thing: It renders the dismounted infantryman unable to influence his immediate area beyond a range of 50 meters.

Having served in light infantry, airborne infantry, and mechanized infantry, I see no real differences beyond extra equipment and employment. Despite all the arguments to the contrary, I have found it quite easy to move from one "kind" of infantry to another. The basic training required is the same, and the tactical employment of the different "kinds" is not all that difficult.

The idea of institutionalizing three different types of infantry with, one assumes, three different MOSs and training programs would put a strain on the training base and fix a problem that doesn't really exist.

JACK E. MUNDSTOCK  
CPT, Infantry  
Fort Bragg, North Carolina

## AUTHOR RESPONDS

Reference the letters by Captain Cormier and Sergeant Holmes in the November-December 1985 issue of INFANTRY (p. 5) in response to my article on extended FTXs for RC units (May-June 1985, p. 42), I would like to make some comments.

First, I would like to commend Sergeant Holmes on some of the excellent points that he made. I know that most Reserve Components now train throughout their annual training period in the field. Some even train at the National Training Center at Fort Irwin, California, and there is no better training available.

But during the 1970s, and when I was working on this article in 1981, many units did not train during the middle weekend, nor did they train for an extended period in a field environment. I am sure there were some that did, even then, as in the case of Captain Cormier's unit. If they did they should be commended, for they are truly superior to most RC units in all aspects of training.

It appears that my article may have been somewhat obsolete, but I remain firm in my opinion of this kind of training, and if there is still a unit somewhere that does not fully benefit from this kind of training, then the criticism will have been worth it.

On another subject, I enjoyed immensely the article "Longstreet and Jackson," by Captain Michael A. Phipps (November-December 1985, p. 29).

I agree with Captain Phipps that Longstreet was not given the credit he so richly deserved. Probably the most apparent reason for his unpopularity was his perceived performance at Gettysburg. He made several efforts to persuade Lee to

change his tactical plan at Gettysburg, but, for some reason, Lee actually thought he could win the battle and end the war.

After the battle, many of Longstreet's subordinate commanders blamed him for the defeat, maybe not knowing what discussions had actually taken place. When he made his feelings known after the war, this naturally made him very unpopular. And his becoming a Republican after the war and joining with old friend Grant in rebuilding the South made him a marked man. As Captain Phipps points out, he became a scapegoat.

TONY N. WINGO  
CPT, Infantry  
Birmingham, Alabama

## PROVOKED

Although I usually do not indulge in writing rebuttals to letters in your "INFANTRY Letters" section, Lieutenant Mark A. Dorney's letter in your September-October issue (p. 4) has provoked me to do so.

Having served for 25 months as an infantry company commander, and having personally organized and run 36 squad-level live fires (all with movement) and 14 platoon level live fires (again all offensive in nature), I take issue with Lieutenant Dorney's entire thesis.

Captain Thomas P. Kratman's article ("Concerning 'Safety,'" May-June 1985, p. 10) and its companion piece ("Training Realism and Safety," by Paul A. Dierberger, May-June 1985, p. 12) represent a lucid, rational argument for reviewing AR 385-63 and, more important, for reviewing all division safety regulations that serve as guidelines for live-fire exercises.

My first point is that though MILES is a good system it is no substitute for live fire; it reinforces some poor tactical techniques (hiding in tall grass, for example), and the soldiers know they are shooting blanks. Scoring grenades or anything else does not improve realism. There is a tremendous psychological difference between throwing a grenade on a range and on a live-fire exercise.

The control measures that need to be

emphasized are lines of departure, overwatch positions, and boundaries.

Live-fire exercise scenarios must conform to doctrine. There must be no "administrative" periods—there will be none in combat. We must suppress the attitude that "In real life we'd do it this way, but because of safety we do it that way." An operation is either tactically sound or it is not. Safety is also a real world planning consideration. If doctrine calls for us to do things we're forbidden to do, either doctrine or the regulation must be changed. Include a realism briefing as well as a safety briefing to tell the soldiers the standards expected of them in terms of realism.

Accidents are the cost of doing business. Just as we know accidents are going to happen with aircraft and vehicles, we should accept that accidents will happen on live fires. We must not be cavalier about it, and we must take all available precautions, but when controls inhibit the imagination of the maneuvering unit, an exercise ceases to fulfill its primary mission—preparing the soldier for battle.

WILLIAM B. CREWS  
CPT, Infantry  
Fort Ord, California

## CALL FOR PAPERS

Abstracts of papers and workshop proposals are invited for the U.S. Army Combined Seminar on Human Technology/Stress Management to be held in Indianapolis on 4-8 August 1986. The deadline is 30 April 1986.

Topics for the seminar include soldier selection and placement, soldier and unit performance in the areas of physical, mental, and stress management skills or morale, and unit cohesion and esprit.

Abstracts should address these five criteria: What does the technology propose to change? What evidence supports the technology's claims? At what target populations is the technology directed? What are the essential characteristics of the technology? What are the cost and benefit factors?

For information, write Commander, U.S. Army Soldier Support Center,

ATTN: ATSG-DSS (Bridges), Fort Harrison, IN 46216-5060, or call (317) 542-3878.

ROBERT C. MITCHELL  
COL, Infantry  
Directorate for Soldier Advocacy  
Fort Benjamin Harrison, Indiana

## WRITING BOOK

I am preparing for publication a full-length book that I have tentatively entitled *Line of Departure*. I would like very much to hear from soldiers who served with me between 1950 and 1975, and I ask them to contact Ms. Julie Sherman for further details.

Ms. Sherman can be reached at P.O. Box 187, St. Lucia, Queensland 4067, AUSTRALIA.

I appreciate any help that can be given to me.

DAVID H. HACKWORTH  
COL, U.S. Army, Retired

## BOOK ON KHE SANH

I am writing a narrative account of the Siege of Khe Sanh (January-April 1967) and need some detailed personal accounts from participants.

I would appreciate hearing from anyone who served at or in support of the Khe Sanh Combat Base (including air and artillery) during the siege.

My address is 1149 Grand Teton, Pacifica, CA 94044; telephone (415) 355-6678.

ERIC M. HAMMEL





# INFANTRY NEWS



QUALIFICATION STANDARDS for the squad automatic weapon (SAW) have changed with the addition of point targets at 600 meters and area targets at 800 meters.

FM 23-14, Squad Automatic Weapon (SAW) M249, which was distributed throughout the Army in December 1985, incorporates the extended range tables and standards.

The qualification scores and ratings are as follows:

Expert	27-24
First Class Gunner	23-20
Second Class Gunner	19-15
Unqualified	14 and below

Units that have not received their copies of FM 23-14 should check to make sure they are scheduled to receive them through pinpoint distribution.

IDEAS ON TACTICS and training are being solicited from the field by the U.S. Army Infantry School in an effort to find better ways of fighting.

The School's Research and Analysis Directorate will conduct an initial evaluation of the ideas to determine the feasibility of adopting and implementing them into its doctrinal literature. Promising ideas will then be presented to the responsible agencies for deeper analysis.

Anyone who has ideas that may improve the Army's ability to fight may write to Commander, USAIS, ATTN: ATSH-RA, Ft. Benning, GA 31905-5000 or call AUTOVON 835-4673/3731.

MORE NONCOMMISSIONED officers should be attending the Infantry Mortar Platoon Course (IMPC) at Fort Benning. Historically, three times as many commissioned as noncommissioned officers have attended the course. A review of mortar unit TOEs shows,

however, that a reverse ratio is now needed to fill the units' needs.

The six-week IMPC, conducted by the U.S. Army Infantry School, is designed to prepare officers and NCOs to supervise and direct the fire of a mortar platoon in support of infantry combat operations.

The course is broken down as follows: Mechanical training (32 hours), fire direction center procedures (96 hours), fire planning and forward observer procedures (9 hours), field firing exercise (24 hours), tactical employment of mortars (18 hours), and student examinations (30 hours).

During Fiscal Years 1986 and 1987, the School will conduct 12 IMPC classes per year with 79 students programmed for each. To meet the new officer to NCO ratio of 1:3, each of these classes should contain about 19 officers and 60 NCOs.

Field unit commanders are asked to help the School meet this goal.

Commissioned officers must be first or second lieutenants, either assigned to or on orders for assignment to infantry mortar units (Active Army or Reserve Component). Those assigned to units in CONUS must have served for one year as infantry or armor/cavalry platoon leaders and must attend IMPC in a TDY and return status. Lieutenants assigned to units overseas may attend in a TDY enroute or a TDY and return status.

Noncommissioned officers must be in the ranks of sergeant through sergeant first class/platoon sergeant. Active duty NCOs must have nine months or more of active service time remaining after

completion of the course. NCOs may attend in TDY and return or TDY enroute status.

Both officers and NCOs must have minimum physical profiles of 111221. No security clearances are required.

Further information and assistance are available from Captain Kim, AUTOVON 784-2513/4308 or commercial 404-544-2513/4308.

A USER'S HOTLINE has been established at the U.S. Army's Natick Research, Development, and Engineering Center. The Natick Center is The Army's proponent for food, clothing, shelters, and air-drop systems.

After Natick's duty hours, a recording device will be available to take the caller's message, and his call will be returned the next business day.

Army issue and supply personnel are encouraged to use the hotline to report, discuss, or resolve problems with centrally procured and issued food, clothing, individual equipment, aerial delivery equipment, tentage, and rigid wall shelters.

The hotline number is AUTOVON 256-5341.

THE DIRECTORATE of Combat Developments has provided the following news items:

• **The Battlefield Management System (BMS).** The BMS, which is intended to improve the command and control capabilities of maneuver unit commanders, is being studied by the Infantry School.

As part of this effort, DCD project officers will be visiting these commanders in the field over the next few months to determine how the system can best serve the units' needs.

BMS will use automated and digital data information processing with existing

## INFANTRY HOTLINE

To get answers to Infantry-related questions or to pass on information of an immediate nature, call AUTOVON 835-7693, commercial 404/545-7693.

For lengthy questions or comments, send in writing to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, GA 31905.

communications systems for the close combat maneuver force at levels from individual combat leader through battalion. The system will be able to process plans and orders (both graphically and digitally), provide navigational and terrain data, and transmit real time intelligence data and routine administrative and logistics reports and requests. Many of these functions will be automated.

The BMS will be integrated into the automated Maneuver Control System (MCS), now being fielded at brigade level and higher. (See *INFANTRY*, November-December 1985, p. 8.)

During their field visits, DCD personnel will actively seek the assistance of infantry commanders from platoon leader to battalion commander and will observe field exercises to determine the specific BMS needs for the infantry battalion. Some of the key issues to be discussed will be the critical tasks recommended for automation, levels of automation, and hardware/software requirements.

• **Small Unit Radio (SUR), AN/PRC-126.** The SUR, a handheld, more practical version of the present AN/PRC-68 small unit transceiver (SUT), will soon be in the hands of infantry leaders. (See *INFANTRY*, September-October 1985, p. 7.)

The SUR will allow communications between the platoon leader, the platoon sergeant, and the squad leaders during dismounted operations. It will have a frequency selection between 30.00 and 87.95 megahertz and a range of three kilometers.

The new radio will be compatible with the AN/VRC-12, and AN/PRC-77, and the SINCGARS family of infantry radios. It will weigh less than three pounds and will be attached to a soldier's load-bearing equipment by means of a carrying case.

This issue of radios will be restricted to infantry and Special Forces units.

• **NBC Protective Mask, XM40.** The new NBC protective mask, scheduled for fielding during the fourth quarter of Fiscal Year 1986, is a hybrid of the current M17 and M9 protective masks. (See *INFANTRY*, September-October 1985, p. 11.)

The mask is equipped with an external NATO standard filter canister, which

can be mounted on either the left or the right side of the mask to accommodate firing weapons from either side; dual voicemitters for better communications; and a drinking tube for water similar to that on the M17 mask.

Some other significant features include larger eye lenses for greater visibility, a larger carrying case with velcro closures, and a filter that can be changed in 10 seconds.

• **Light-Fighter Chemical Protective Ensemble (Lite-Protector).** A need has been identified for an extremely lightweight "risk-taking" NBC overgarment that will offer a 30 percent reduction in heat stress and a 40 to 50 percent reduction in weight over the present garment. A key feature of this developmental item will be its low initial pack volume (100 cubic inches), which will allow the Lite-Protector to fit inside a BDU pocket.

This new garment would be used primarily by light infantry divisions and special operations forces during low NBC threat operations. Development should begin in Fiscal Year 1987, with a projected initial operational capability of Fiscal Year 1988-89.

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THE PRESIDENT of the U.S. Army Infantry Board has submitted the following news items:

• **Mortar Ballistic Computer (M23).** The MBC is a small, hand-portable computer (7.2x10.5x2.3 inches) weighing 6.6 pounds. It is designed to be able to calculate all the fire control information needed to lay and fire 60mm, 81mm, and 107mm mortars with all the types of rounds designed for those systems.

It is a solid-state electronic computing device with a waterproof membrane switch keyboard and panel switches, circuit boards, display elements, and power supply. The MBC is powered either by self-contained throw-away or rechargeable batteries or by external power sources (AC or DC). It has two batteries—an operational battery, which provides the voltage for the control panel, display, microprocessor, and modems, and a "keep-alive" battery, which is incorporated into the circuitry to power the memory. The MBC is designed to accept

fire requests from forward observers through the digital message device (DMD), AN/PSG-2, over tactical radio or wire communications.

The MBC, formerly called the Mortar Fire Control Calculator (MFCC), was tested by the Infantry Board in late 1980. (See *INFANTRY*, May-June 1981, p. 7.) From these and other tests, the Army concluded in July 1981 that the MBC would be acceptable after specified improvements had been incorporated into it.

In March 1985 the 197th Infantry Brigade was designated to be the first unit equipped with the MBC. From October through December 1985, the Infantry Board conducted tests using the TOE 107mm mortar platoons from the brigade.

The functional performance of the MBC was tested during both nonfiring and live-fire exercises. During the nonfiring exercises, the MBC operators performed some representative tasks required of FDC personnel during mortar platoon tactical exercises. These tasks included computing firing data for 60mm, 81mm, and 107mm mortars, with the MBC operators computing data for their respective platoons.

During both types of exercise, the mortar platoons were supported by FIST personnel (forward observers) who transmitted requests for fire and other information to the FDC over normal communications lines using both voice and the DMD.

To determine whether deficiencies and shortcomings detected during previous testing had been corrected, specific test events required the MBC operators to compute the firing data not obtained during the normal nonfiring or live-fire exercises.

During all testing, data was collected on reliability, availability, and maintainability; logistics supportability; human factors; and safety.

These test results will be used by the Infantry School to ensure that the system is ready to be fielded.

• **Mini Eyesafe Laser Infrared Observation Set (MELIOS).** Two prototype mini laser rangefinders were tested at Fort Benning in 1979. (See *INFANTRY*, May-June 1980, p. 8.) In 1982, a decision was made to develop an eyesafe



system, now called the MELIOS, AN/PVS-6.

A small, lightweight, handheld device, the MELIOS was designed to meet ranging needs out to the maximum range of infantry weapon systems with a required accuracy of plus or minus five meters. It has a monocular optical sighting telescope with 5X to 7X magnification and a seven-degree field of view. The range is displayed digitally when the read-out switch is activated. Prototypes from two contractors were recently provided to the Infantry Board for testing.

Fifty-four combat arms soldiers (MOS series 11 and 19) from the 197th Infantry Brigade and the 29th Infantry Regiment participated in the first operational test of the MELIOS, conducted by the Board last fall. These test soldiers included small unit leaders, vehicle commanders, direct fire and indirect fire weapon gunners, and reconnaissance personnel. All of them were proficient in map reading and in the current range estimation techniques (visual range estimation aided by binoculars, compass, and map).

Side-by-side comparative tests of the two prototypes and the current range estimation techniques were conducted. Ranging exercises against single and multiple target arrays at ranges out to 4,000 meters were conducted from a mounted position in the commander's hatch of the M2 Bradley Fighting Vehicle, from a building, and from a dismounted position on the ground using the prone, kneeling, and foxhole body positions.

Reliability, availability, and maintainability; logistical supportability; human factors; and safety data was collected throughout the tests. Night signature and ranging under illumination were also tested.

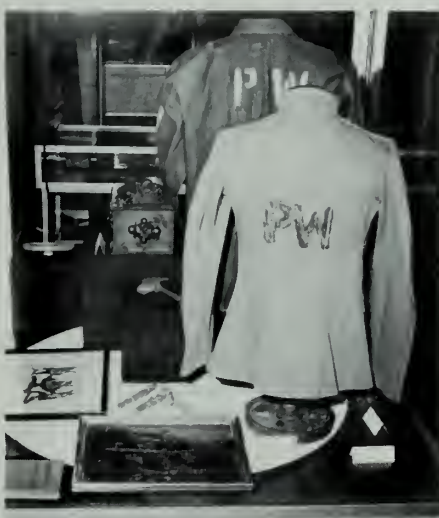
These test results will be used by the Infantry School in developing the validation In-Process Review position for MELIOS.

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THE NATIONAL INFANTRY MUSEUM has provided the following news items:

A large prisoner-of-war exhibit was opened at the Museum following the

rededication of a prisoner-of-war monument that was transferred to Fort Benning from the City of Columbus, Georgia, in November 1985. (See *INFANTRY*, January-February 1986, pp. 8-9.) The monument had been erected following World War II in remembrance of all the soldiers who died while imprisoned. The father-in-law of such a soldier had originated the idea and led the drive for the monument. Members of the family of that prisoner were present for the rededication ceremony and, as previously reported, Dr. Brooks Kleber, himself a prisoner of war in Germany during World War II, was the speaker for the occasion.



The POW exhibit includes a large number of artifacts that belonged to Colonel Ray M. O'Day, donated by his son, Lieutenant Colonel (Retired) Nat O'Day.

Colonel O'Day survived the Bataan death march in 1942 and spent the remainder of the war a prisoner of the Japanese. In the camp he earned the nickname "Colonel Fix-It" and a camp saying arose, "Don't throw it away, give it to O'Day." He learned early to keep as busy as possible so that time would pass more quickly. With a crude selection of homemade tools and scraps of anything he could get, he made a wide variety of items that the prisoners badly needed. He was also able to repair shoes and to mend and patch clothing, which was in short supply.

This exhibit shows items made or used by prisoners of war from the Civil War through the Vietnam War. Among these items are hand and leg irons used in Civil

War prisons, articles of clothing worn by American prisoners and those of other nationalities held prisoner by the United States, and personal articles such as letters, identification papers, and a Bible.

Also displayed are articles made by prisoners, such as playing cards, hammocks, underwear, clothespins, and various carved objects. One object, a large American flag made by prisoners at a German POW camp, was assembled from scraps of cloth and crudely hand sewn with the stars glued on. This flag was raised above the camp on 6 April 1945, just after its liberation by the 95th Infantry Division.

The prisoner-of-war exhibit, a moving tribute to U.S. prisoners of war, serves as a reminder of the sacrifices they made. The accompanying photographs show some of the items in the exhibit.

The Museum continues to receive donations of articles that improve its collection. A number of unit histories have been donated recently, as well as regimental crests and historical photographs. The Lizzie Rutherford Chapter of the United Daughters of the Confederacy donated a copy of the book *City of Progress, A History of Columbus, Georgia, 1828-1978*, an important reference source on the area and its people.

Other items donated include World War II brown leather boots worn by the donor's father throughout the war; an 1808 booklet entitled *Military Companion* and an 1825 epaulet, both of which were used by an ancestor of the donor; and a U.S. Army Medical Department flight service chest.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia, 31905-5273, AUTOVON 835-2958, or commercial 404/545-2958.

# FORUM & FEATURES



## Professional Reading Program

CAPTAIN HAROLD E. RAUGH, JR.

Our best professional soldiers have long recognized that the diligent study of military history is essential to their success. According to Antoine Jomini, Swiss general, historian, and author of *The Art of War*, "Military history, accompanied by sound criticism, is indeed the true school of war."

Why study military history and spend precious time poring over yellow-paged tomes crammed with the exploits of long-dead warriors? Quite simply, because we can learn from history. In the words of Captain Sir Basil H. Liddell Hart, history "provides us with the opportunity to profit by the stumbles and tumbles of our forerunners."

Even though the tactics, techniques, and weapons of warfare have changed and become increasingly lethal with the progression of civilization, the human element of leadership and military history remain constant. Brigadier (later Field-Marshal the Earl) Archibald P. Wavell of the British Army, a highly successful commander and proconsul and a keen observer and chronicler of military history, emphasized studying the individual soldier. He wrote:

*I do advise you to study the human side of military history, which is not a matter of cold-blooded formulas or diagrams, or*

*nursery-book principles such as be good and you will be happy; be mobile and you will be victorious; interior lines at night are a general's delight; exterior lines in the morning are the general's warning, and so on.*

*To learn that Napoleon in 1796 with 20,000 men beat combined forces of 30,000 by something called "economy of force" or "operating on interior lines" is a mere waste of time. If you can understand how a young, unknown man inspired a half-starved, ragged, rather Bolshie crowd; how he filled their bellies; how he out-marched, outwitted, out-bluffed and defeated men who had studied war all their lives and waged it according to the textbooks of the time, you will have learnt something worth knowing.*

### GUIDANCE

More recently, the Chief of Staff of the Army has charged "all soldiers, from private to general, who are serious about the profession of arms and making our Army one of excellence," with reading and studying military history. It is therefore the duty and responsibility of all leaders, especially at the Infantry brigade, battalion, and company levels,

to translate this guidance into meaningful, effective, and productive military history study programs.

Toward that end, Company B, 5th Battalion, 21st Infantry Regiment, a COHORT battalion of the 7th Infantry Division (Light), has developed a professional military history reading and writing program that has the potential to be extremely effective in improving the knowledge and the leadership abilities of all its officers.

The personnel stability in a COHORT unit is especially conducive to the long-term study of military history, with virtually no repetition in the program. For example, in Company B, all four lieutenants (the executive officer and the three rifle platoon leaders) are all second lieutenants with dates of rank within one month of each other; all arrived in the unit within a three-month period; and they all have about the same level of knowledge and experience. Other types of units, however, can easily adapt the program to suit their own needs.

The company's professional military history reading and writing program was conceived and developed during the three-month chain-of-command training period before its soldiers arrived and the unit was formally activated.



Informal sessions were conducted in which anniversaries of famous unit battles, stories of regimental Medal of Honor winners, and other vignettes of unit heritage were used to explain the value of military history to the unit's officers. To further stimulate and enrich their intellectual interest, the program called for all of Company B's officers to read and discuss two chapters from *A Guide to the Study and Use of Military History*, published by the Army's Center of Military History (Washington, D.C.: U.S. Government Printing Office, 1979). The two chapters were Chapter 2, "A Perspective on Military History," by Colonel Thomas E. Griess, and Chapter 3, "An Approach to the Study of Military History," by Lieutenant Colonel John F. Votaw. (This illuminating book, which is issued to all lieutenants in the Infantry Officer Basic Course at Fort Benning, served as the foundation for the unit's military history study program and its jumping-off point.)

## HUMAN FACTORS

The first year of the company's military history reading program, in which the company's officers are now engaged, concentrates on studying the human factor in the Army, small unit tactics, and battlefield leadership, and provides a historical and philosophical "perspective on infantry." (See accompanying chart.)

After reading and studying the first year's books, each officer prepares a short, handwritten synopsis of a specific chapter or incident in each book, then discusses that item in an informal symposium. This gives each officer a chance to express himself both orally and in writing, and the company commander an opportunity to assess each lieutenant's ability to communicate effectively. Then the commander can recommend remedial programs where they seem to be needed.

In addition to reading professionally enriching books during the first year, each of the unit's officers is expected to hone his reading and writing skills by compiling a research paper on a historical topic of individual interest in one of the following areas:

## ASSIGNED READINGS

### FIRST YEAR

Jul-Aug 1985	Malone, Colonel Dandridge M., USA (Ret.). <i>Small Unit Leadership</i> . Novato, CA: Presidio, 1983.
Sep-Oct 1985	Rommel, Field Marshal Erwin. <i>Attacks</i> . Vienna, VA: Athena, 1979.
Nov-Dec 1985	English, John A. <i>A Perspective on Infantry</i> . New York: Praeger, 1981.
Jan-Feb 1986	Blumenson, Martin, and James L. Stokesbury. <i>Masters of the Art of Command</i> . Boston: Houghton Mifflin, 1975.
Mar-Apr 1986	Newman, Major General Aubrey S. <i>Follow Me—The Human Element in Leadership</i> . Novato, CA: Presidio, 1981.
May-Jun 1986	Lanham, C.T. <i>Infantry in Battle</i> . Washington, D.C.: Infantry Journal Press, 1939 (CGSC Reprint).
Jul-Aug 1986	Peters, Thomas J., and Robert H. Waterman, Jr. <i>In Search of Excellence</i> . New York: Harper & Row, 1983.

### SECOND AND THIRD YEARS

Sep-Oct 1986	Collins, LTG Arthur S., USA (Ret.). <i>Common Sense Training</i> . Novato, CA: Presidio, 1978.
Nov-Dec 1986	Marshall, S.L.A. <i>Men Against Fire</i> . Gloucester, MA: Peter Smith, 1978.
Jan-Feb 1987	Gugeler, Russell A. <i>Combat Actions in Korea</i> . Washington, D.C.: Office of the Chief of Military History, 1970.
Mar-Apr 1987	MacDonald, Charles B. <i>Company Commander</i> . New York: Bantam, 1978.
May-Jun 1987	Du Picq, Ardant. <i>Battle Studies</i> . Harrisburg, PA: Stackpole, 1958.
Jul-Aug 1987	Van Creveld, Martin. <i>Supplying War</i> . New York: Cambridge University Press, 1977.
Sep-Oct 1987	Sun Tzu. <i>The Art of War</i> , trans. Samuel B. Griffith. New York: Oxford University Press, 1963.
Nov-Dec 1987	Von Mellenthin, F.W. <i>Panzer Battles</i> . Norman: University of Oklahoma Press, 1958.
Jan-Feb 1988	Von Clausewitz, General Carl. <i>Principles of War</i> . Harrisburg, PA: Stackpole, 1960.
Mar-Apr 1988	Patton, General George S., Jr. <i>War As I Knew It</i> . Boston: Houghton Mifflin, 1975.

- Infantry Battalion (Light) concept of operations in a low-intensity conflict.

- Battlefield logistics and resupply operations for the Infantry Battalion (Light).

- A historical example of a battle won by light infantry forces.

- A historical example of effective small-unit leadership in combat in a light infantry unit.

These papers must include the following information, which Colonel Votaw recommended in his article:

- An evaluation of the strategic situation (period of history; war; international adversaries; principal events leading up to the battle, campaign, or conflict analyzed).

- A review of the tactical setting (location; any terrain advantages held by either side; approximate force ratios; types of forces, if relevant; feasible courses of action available to antagonist).

- A list of other factors that affected

the event (effects of terrain or weather; special advantages or disadvantages the antagonists had).

- A synopsis of the conduct of the event (opening moves; salient features; outcome).

- A statement of the historical lessons provided by the event.

- An assessment of the significance of the event.

As these projects are completed, they are evaluated by the company commander. Then, in an officer professional development (ODP) session, each officer presents his topic and shares his ideas with his fellow officers of the battalion. The purposes of this historical research project, in addition to giving the company's officers a greater appreciation for military history and teaching them lessons about its application, are to improve their analytical and research abilities and their oral and written communication skills.

During the second and third years of the company's military history reading program, the books to be read and studied include those on military philosophy, small unit actions, training, and logistics, and also an autobiography (see chart).

Again, each lieutenant will study these books, prepare a synopsis of an assigned chapter or incident, and relate it to contemporary aspects of military leadership and tactics.

The members of Company B realize,

of course, that they may not always be able to keep strictly to the program's schedule of reading and writing projects. Nevertheless, the initial successes indicate that the communications skills of the company's lieutenants have already significantly improved and that these officers now have a much greater appreciation for the lessons of military history and for their unit's heritage.

The importance of the diligent and thorough study of military history in

making our Army one of excellence cannot be overemphasized. We can, and must, learn from the experiences of our forebears in the profession of arms.



**Captain Harold E. Raugh, Jr.**, is commander of Company B, 5th Battalion, 21st Infantry Regiment at Fort Ord. He previously served in various platoon leader and staff officer assignments in the Berlin Brigade and the 2d Infantry Division.

# Buzzword Cowards

FRED BOST

Too many otherwise brave infantrymen become cowards when faced with a certain recurring duty requirement. It doesn't help to realize that this same kind of cowardice prevails throughout much of the rest of the Army. This cowardice is displayed almost every time a leader sits down to write the narrative section of an officer or an enlisted evaluation report (OER, EER)—and hides behind buzzwords.

In theory, OERs and EERs are a key factor in the promotion and assignment of soldiers, because they allow a comparison of strengths and weaknesses. But this strange quirk of cowardice has kept the theory from becoming fact. Because ratings on the numerical scales of OERs and EERs have always been inflated, the narrative section of the report is the only place a user of the report has any hope of "seeing the individual" (and thus of making accurate comparisons). But too many evaluators refuse to narrate the simple truths the users need.

Why? Their reasons are hard to pin down, but judging by their submissions, these people seem to be highly uncomfortable with "writing" and afraid that commonly used, everyday words—"you and me language"—will be regarded as inadequate and below standard.

In short, too many soldiers (even some with college degrees) fear that their writing will somehow reveal them as uneducated or unsophisticated. Because of this fear, they try to give their writing more "pizzazz" by borrowing strange words and unfamiliar phrases, the kind of wording supposedly considered impressive. This "borrowing" not only cheats the government of the intent of the report—an accurate, detailed assessment of the soldier being evaluated—but sometimes it backfires on the writer and makes him look like a dunce.

## EXAMPLES

One writer, for example, was obviously unfamiliar with the meaning of the word "potential" when he wrote, "SFC Walkonwater has far surpassed his highest potential."

The writer of this next sentence, from another report, apparently borrowed more than a single word:

*SFC Carefree's basically questioning nature regulates his adaptability to somewhere on the borderline of excellence; however, his outstanding attitude and initiative traits, combined with his graded sense of responsibility and*

*performance, cause him to be a reliable asset to this section or an attribute to the Army.*

Confess! You recognize these borrowed words, don't you? You've probably latched onto some of them yourself: *adaptability, outstanding attitude, sense of responsibility, reliable asset, attribute to the Army.*

It's not that these words are bad in themselves. When used to introduce something specific, any of them will work fine. But when such words are tied together as a group, introducing nothing, as in this example, they lead nowhere.

What is making these empty word structures more destructive than ever is that they are becoming more prevalent. Today, in fact, they are being actively pushed by the ignorant as the correct approach to writing narratives. As a result, the use of copycat phrases has become a fad. At various posts, multi-page lists of phrases and buzzwords are openly exchanged by soldiers. Apparently just two criteria are used for composing such a list: The wording must sound pretentious, and it must be so nonspecific that it can be applied to just about any soldier doing just about any job.

Here are some examples of suggested phrases culled from a list entitled



“EER/OER Awards Assistance Packet”:

*Meticulous attention to detail*  
*Effectively planned and supervised*  
*Became infused in*  
*Was outstandingly successful*  
*Was particularly noteworthy*  
*Acted as a pillar of strength*

The 136 exotic offerings listed in the same document include the following words—complete with misspellings:

<i>exultant</i>	<i>fabolous</i>
<i>facile</i>	<i>inexhaustable</i>
<i>infectious</i>	<i>infallible</i>
<i>sedulous</i>	<i>partinacious</i>

The soldier who makes use of such a list has become a buzzword coward—afraid to use his own mind to relate the facts as only he knows them.

## NO PROOF

Another reason often given for resorting to copycat words is that this is the kind of writing higher commanders want. Yet the people who say this cannot prove their answer by any regulation or directive.

The truth is that our top leaders have always advocated the use of short, familiar words; concrete, specific descriptions; and logical, easily understood sentences.

Want proof? Below is an actual narrative paragraph from an EER written by a brigadier general who, at the time of writing, was serving in the Chief of Staff's office at the Pentagon. (Let's face it, you can't get much higher than that.)

*SGM Whosis is exceptionally outstanding. He would be highly effective as a Command Sergeant Major in a major command. As an action officer working in the Office, Chief of Staff, Headquarters, Department of the Army, he performs the same duties as specially selected majors and lieutenant colonels and matches them in performance. He is unique in his ability to determine causes for undesirable conditions he observes on field visits. SGM Whosis is an accomplished speaker; he writes extremely well.*

Notice that the general concentrates specifically on *what* the soldier did during the rating period, and on *how well* he did it. The wording is easy to understand, and it brings pictures to the mind.

If you hide behind buzzwords and would like to change, try being yourself and using your own words. Before you reject the thought of using normal language, remember that for many years your language has been serving you well as a professional soldier. Probably, you have been praised for classes you taught, and you have had no problem critiquing soldiers and describing their performance or praising a soldier face-to-face for a job well done. Why then do you need someone else's words to handle such tasks on paper? The secret is to write about a soldier's good points and bad points the same way you would talk with your commander about those good points and bad points. It's that simple.

Of course, structuring your thoughts to put them on paper does cause some minor differences. For one thing, because you are limited by the space on the form, you have to choose your points carefully. For another, when speaking to your commander, you would probably let jargon slip into the conversation (terms that might not be understood outside your type of unit). But there's no real problem with that. After writing your narrative the first time, you can go back over it, pull out the jargon, and replace it with words that say the same thing in a way that is more understandable to outsiders.

While going over your narrative, check out a few other things. Unless you have a good reason to do otherwise, use the active voice—make each of your sentences first mention the soldier before saying something about what he does or how well he does it. (The sentences in the general's narrative are fine examples.)

## SUGGESTIONS

And here are a few other suggestions that can help you do the job right:

- Make the opening sentence say something important about the soldier's overall performance during the rating period. Have this topic sentence signal your proposed direction to the reader. Make it general enough to act as a “fence” to tie together the specific facts that follow. (You saw how the general laid out the facts in the report he wrote;

lay yours out in the same way.)

- Try to use short, easy-to-understand words that will help the reader picture the situation.

- Get *details* into your narrative. Show the soldier's value in concrete terms, or else describe his actions. A good technique is to present shortcomings by offsetting them with accomplishments. For example, “As a new sergeant, he has often failed to pass on instructions to his team members. He does, however, make an extra effort to see that his mission is always accomplished.”

- Another good technique is to follow a general statement with a closely related specific item: “during this rating period, he has greatly improved his professional knowledge. For example, he recently learned, on his own, how to field strip the Soviet PPS-43 Sudarev submachine-gun.”

- If a soldier's performance has changed since the last report, say so: “His performance is improving.” or “He has shown no improvement since the last rated period.”

- The best sentence to close with is one that leaves no doubt as to your judgment of the soldier's performance during the rated period: “Despite the weak area noted, Sergeant Mann's desire to do well stands out above everything else.” or “In short, during this rating period, Sergeant Mann performed all assigned tasks in a professional manner.” or “Sergeant Mann has made every effort to become the best soldier in his division.”

Above all else, the important thing to remember is to be sincere. State the facts accurately as you know them; don't resort to copycat phrasing; don't hide behind buzzwords.

Traditionally, the infantry has led the way across treacherous battlefields. Now a peacetime battle is shaping up, the battle to rescue the floundering evaluation system.

You can help win that battle by making sure you yourself handle the job right.

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**Fred Bost** is a retired sergeant major, having served in the U.S. Navy during World War II, then with the Army National Guard, and more than 19 years with the Regular Army (all of it with Infantry or Special Forces units). He was a newspaper reporter for eight years and now teaches effective writing at Fort Bragg.

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# CSS Matrix

CAPTAIN STEPHEN R. WINTER

Field Marshal Erwin Rommel is often quoted as saying that "the battle is fought and decided by the quartermasters before the shooting begins." The "quartermasters" of the fighting forces are the combat service support logisticians (S-4), the administrators (S-1), the maintenance officers (BMO), and the medical platoon leaders. Even if all the equipment, fuel, ammunition, personnel, and transportation assets are available, though, the fighting units must receive their proper allocations at the proper times and places on the battlefield, and sometimes that is not a simple matter.

Paragraph IV of operations orders, along with logistics annexes and service support overlays, are routinely tucked away near the end of the orders. Tacticians, interested primarily in Paragraph III, often only glance superficially at Paragraph IV. The existing logistical manuals are heavy on doctrine but short on technique for tactical units.

We have a tactical execution matrix to use as an easy-to-read, quick reference for the execution of instructions. (See INFANTRY, September-October 1985, pp. 34-36.) Why not a combat service support matrix that works the same way? The CSS matrix shown here is a technique for incorporating the combat service support concepts into a more practical and useful format. It is a one-page matrix that is designed to help company commanders and logisticians understand how their support is to be accomplished.

With it, a commander, executive officer, or CSS representative knows exactly when, where, and how much of each class of supply his unit will receive and also the source of the unit's medical and maintenance support. Thus, the service support and tactical matrices stand alone, saving the user the time it would take him

to search through pages of operations orders to extract the information he needs.

To develop the service support matrix, the S-4, on the basis of his commander's guidance, first determines how he will support the planned operation. He considers all of the available assets, all information dealing with supply, recovery, and evacuation, and then develops Paragraph IV of the operations order, which includes the matrix itself.

## SAMPLE

In preparing the matrix, he lists the task force elements across the top and the classes of supply, evacuation, recovery, and other support along the left margin. Inside the blocks, he notes all the pertinent details, including amounts of each class of supply, LOGPAC windows, and priorities.

The sample matrix shown here has been developed in this manner:

**Class I.** The S-4 has entered for each unit where the LOGPAC will be, when it will be there, and whom the unit will support or receive support from. Company A of the infantry battalion (A IN), for example, will support the scouts, while the Vulcan section will receive its Class I supplies with Company B of the infantry battalion (B IN).

**Class III.** He has noted which vehicle will come to each unit (TPU, HQ 54 to A IN); he has shown that the engineers will have a vehicle attached and at what point they must notify the S-4 to resupply them.

**Class IV.** In these blocks, the S-4 has written what type of barrier packages each unit will receive. These packages are designated as company-sized and then broken down into platoon-sized packages ("2 IN" and "1 AR" stand for two infantry platoons and one armor platoon).

**Class V.** The S-4 has shown in these blocks what type of package each unit will receive and how much and what type

	A/IN	B/IN	C/AR	D/AR	E/IN	4.2	SCT	VUL	ENG
CL I	LOGPAC WINDOW 1400-1700 LRP 2 SCTs	LOGPAC 1400-1700 LRP 4	LOGPAC 1400-1700 LRP 4 VUL	LOGPAC 1400-1700 LRP 2	LOGPAC 1400-1700 LRP 3	LOGPAC w/TOC	From TM A	From BP 23 TM C	LOGPAC 1400-1700 LRP 5
CL III	TPU HQ 54 SCTs	TPU HQ 55	TPU HQ 56	TPU HQ 57	TPU HQ 58	TPU HQ 59 w/TOC	Same as --	CL 1	TPU HQ 60 Attached Contact S-4 When 1/3 Left
CL IV	2 IN 1 AR Packages	2 IN 1 AR Packages	2 AR 1 IN Packages	2 AR 1 IN Packages	2 IN	1 IN	1 IN		2-8 Trucks (B-121 8-244) MK 123456
CL V	Standard Push Packages Plus Prestock		Requested Amounts Plus Prestock		Standard Push Packages 24 BL for Prestock	Prestock 50 WP 25 ILL 100 HE	BL Reestablished	Prestock 14 BL	Reestablishes BL Plus Prestock from TM C
M E D	ENG 23 SCT Add 1 AMB	Secondary Asst to Engineers Vulcan Sec	Assist GSR, ENG, VUL		MED AMB Area Cover- age from CP 4	MED EVAC from CP 4	From TMs A, C, D	From TMs B, C	
M A I N T	1-88 Area Coverage Dozers		Tanks, TOWs	Vulcans, C&C	Mills.	Self- recovery to CP 4	Any vehicle not self- recovered will be destroyed		



of ammunition will be cached. For example, the 4.2-inch mortar platoon will receive 50 rounds of WP, 25 of illumination, and 100 of HE. (The S-4 decides on the size and make-up of Class IV and V packages in accordance with his available assets.)

**Medical evacuation.** He designates units to assist independent elements such as the mortar platoon, scouts, or antiarmor company. He also designates whether a unit will receive additional support assets. The scouts, for example, will evacuate to A IN, while A IN assists the engineers and receives an additional ambulance; E IN will receive its evacuation vehicles from CP 4.

**Maintenance.** In this block, he shows how the battalion maintenance officer (BMO) will support the task force. For example, the 4.2-inch mortars will recover their vehicles to CP 4; an M88 recov-

ery vehicle is reserved for area coverage. This block details maintenance priorities, which in this example are bulldozers, tanks, TOWs, and Vulcans, in descending order.

Separate units are an additional effort for the support planner. Air defense artillery, mortars, antiarmor elements, scouts, tactical operations centers, trains, and others do not have organic support; they are supported by the nearest element that does have organic support.

The combat service support matrix can be used for either offensive or defensive missions. In defensive missions, the matrix includes Classes I, III, IV, and V. Offensive missions will emphasize Classes I, III, V and recovery and evacuation of personnel, recovery of vehicles, and maintenance priorities.

Once a task force staff has been trained to the point of being able to formulate a

solid, comprehensive logistical plan on the basis of METT-T, the next problem is seeing that the plan is executed properly.

Although the subordinate elements could get the necessary logistical information they need from Paragraph IV of the operations order and from the service support overlay, that effort would cost them valuable time and could lead to some confusion.

The service support matrix, which is a quick, simple compilation of logistical information, can save a user that time just as it will eliminate any possible cause of confusion.

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**Captain Stephen R. Winter** has developed techniques for combat service support personnel at the National Training Center and has developed CSS doctrine for current manuals. A 1980 graduate of the University of Colorado, he recently completed the Infantry Officer Advanced Course. He is now assigned to the 2d Battalion, 34th Infantry at Fort Stewart.

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# The Vital Link

MAJOR THOMAS R. ROZMAN

Division 86 is now being implemented throughout the Army. This is the most significant reorganization of the Army's ground combat power since 1962. Combat support elements once again have been moved into the headquarters company. A fourth line company has been given to the armor and mechanized infantry battalions, and an antiarmor company (Company E) has been added to the mechanized infantry battalions.

One of the most important things about this reorganization is the radical change it makes in the way battalions conduct their maintenance. Trends toward removing administrative burdens from the maneuver company commands were apparent in the mid-1970s — such as the consolidation of personnel administration at battalion level — but the idea of cen-

tralizing maintenance has always met with resistance. The old line mechanized infantrymen and tankers were always concerned about responsive logistics for mounted operations — Would they be able to keep their vehicles operational?

## FEARS

The idea of eliminating organic maintenance at company level, at least in garrison, raised fears of a potential for failure in several areas: the need for operators to identify parts failures through their preventive maintenance; the responsive requisitioning of those parts; and a consolidated maintenance support activity's ability to be responsive in repairing vehicles in the large numbers

found in the mechanized infantry and armor battalions.

The Israeli experience of recent years, however, argued strongly for a consolidated maintenance effort. The fluid battlefield and the numerous vehicle casualties spawned by modern mechanized warfare showed clearly the wisdom or timely and rapid recovery and repair well forward in the operational area using efficiently pooled resources.

In our own Army, garrison maintenance crews, when considered in the context of personnel realities in the 63-series MOSs, had always seemed to operate short of the number of skilled personnel required to keep a unit's vehicles operational. How better to provide high-quality maintenance in this situation than to consolidate the available resources? Reality,

in more ways than one, strengthened a consolidation concept, and Division 86 embraced it.

But the old troopers' concerns still have not gone away, and we cannot wish them away. So how do we make it work? We

know it takes experience, knowledge, and constant checking and rechecking to perform effective maintenance.

One critical rule in getting things done has always been to put someone in charge and to make sure he knows he is respon-

sible. But what specific responsibilities does a maintenance supervisor have? If we are consolidating maintenance but have concerns about our ability to perform good preventive maintenance, supervise operators, and work within a consolidated maintenance operation, then we should be able to tell the people who supervise these operators about their responsibilities. Yet none of our doctrinal literature gives them to us.

In response to this need, the 2d Brigade, 1st Armored Division tackled the job of developing some suitable guidelines and responsibilities. The brigade focused on the platoon leaders and platoon sergeants in the various companies as being the vital links in the preventive maintenance supervisory chain. A study group in the brigade's mechanized infantry battalion analyzed the problem. The experience of the unit and other battalions in the brigade, along with a study of recently published Division 86 doctrine (TT 71-2J and FM 29-2J, for example), provided material for a draft list for each of these leaders. These draft lists of duties and responsibilities were circulated to all the brigade's battalions for comment. The lists were then refined and forwarded to the brigade commander, approved, and distributed. Their contents are shown here.

These lists of duties for platoon leaders and platoon sergeants have been a major step toward solving some of this brigade's concerns about Division 86 maintenance. Lists such as these are not the answer to all our maintenance challenges, of course. Nevertheless, by incorporating these duties or some combination of them into a platoon leader's OER support form, we are going a long way toward assuring effective maintenance under the Division 86 organization. At least our platoon leaders know what we expect of them.

## PLATOON LEADER'S DUTIES

**Responsible for the combat readiness of his platoon's vehicles, communication systems, small arms ammunition, and equipment.**

**Assigns an operator and maintenance supervisor for all platoon vehicles.**

**Enforces standards for operator/crew maintenance, use of -10 operator's manual, proper PMCS, and active maintenance supervisor involvement in platoon maintenance operations.**

**Leads by example in maintenance standards and operations.**

**Sets maintenance tasks, conditions, and standards for maintenance training and effectively uses troop leading procedures in planning maintenance operations, in accordance with company commander's guidance.**

**Directs and supervises subordi-**

**nate leaders in training operators and crew personnel to standard in maintenance procedures.**

**Anticipates future maintenance needs, coordinates for maintenance support, and allocates maintenance resources.**

**Supervises maintenance operations, verifies standards, critiques maintenance supervisors, and enforces good maintenance habits.**

**Demands timely follow-up of maintenance discrepancies and accepts only high quality repairs.**

**Evaluates maintenance support, verifies repair part requisitions for platoon, and provides feedback to company commander and battalion maintenance officer.**

**Knows and keeps commander informed of current platoon maintenance status.**

## PLATOON SERGEANT'S DUTIES

**Executes platoon leader's maintenance duties in his absence.**

**Insures combat readiness, serviceability, and cleanliness of platoon vehicles, ammunition, communication systems, and equipment.**

**Provides maintenance training proficiency to assist platoon leader, and for platoon validation of job book maintenance skills.**

**Conducts maintenance training and is available to advise the platoon leader in maintenance operations.**

**Supervises squad leaders in use of operator and crew maintenance forms and records.**

**Trains subordinate leaders on the use of -10 operator's manual, PMCS, DA 2404, dispatch procedures, maintenance procedures, safety, and responsibilities of maintenance supervisors.**

**Makes on-the-spot corrections of maintenance deficiencies, retrain maintenance supervisors, and helps enforce maintenance standards.**

**Insures platoon accountability,**

**accomplishes implied tasks, and prepares platoon to receive maintenance support.**

**Manages allocated maintenance resources and executes platoon scheduled services.**

**Responsible for key control, security, accountability of platoon vehicles, small arms ammunition, and equipment.**

**Supervises platoon recovery operations, application of combat field expedient repairs, and immediate maintenance follow-up.**

**Verifies installation of repair parts, reconciliation of deferred maintenance DA 2404, compliance with vehicle load plans, and unit maintenance SOP.**

**Supports and reinforces the platoon leader's maintenance policy as platoon's quality control manager.**

**Enforces clean and safe maintenance environment.**

**Accomplishes maintenance mission to standards.**

**Knows and keeps platoon leader informed of current maintenance status.**



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# USAR: Leadership vs. Management

CAPTAIN JAMES H. DUDLEY

If you're a U.S. Army Reserve commander, did you ever wonder why troops don't show up for drill; why they show up in the wrong uniform, needing haircuts; why they don't know their common or technical skills; or why they don't reenlist? If so, ask yourself whether you're really providing leadership or just managing.

Many Reserve leaders and commanders ask this question, but few dig deep enough to find the cause of the problem. Most just try to treat the symptoms for three years and then leave the disease for someone else to cure.

Such leaders offer a variety of excuses: I don't have enough qualified people to teach the others; I don't have enough time on the weekends; I don't have enough resources (money, equipment, or training areas); I don't have enough knowledge myself; As long as my statistics look good, I'm o.k.; If my Reservists don't get it done, the full-time force will; My soldiers are civilians 28 days a month and don't want to put up with a lot of harassment on a drill weekend.

There are several responses to such statements:

First, for the past four or five years, the Chief of Staff of the Army has told us time and again that we have one mission, which consists of two priorities (not to be confused with responsibilities)—training our troops and maintaining our equipment. This is our mission—train and maintain. How much simpler could it be?

If we and our chain of command left it at that, it would be easy to handle, but, as we know, the Army expects us to be

able to do more than two things at once. That's why the chain of command is constantly hounding us about our strength, MOS qualification figures, Unit Status Reports, Material Condition Status Reports, attendance, appearance, Army Physical Readiness Test results, weight control, and reenlistment rates.

Because these are areas that can be evaluated from month to month and year to year, they have become statistics by which we are evaluated. As a result, we sometimes fudge on one or more of them to make our unit, and subsequently ourselves, look better. What's more, we evaluate our subordinates on these same statistics.

## EXPECTATIONS

The second response to the excuses for poor participation is to ask why we think the average enlisted person is in the Army Reserve. If we think it's for the money, we're mostly wrong. If we ask them, they'll tell us what they expected when they enlisted (and maybe how that goal no longer matters to them because of the way we do business). Their reasons will range from wanting camaraderie, to wanting to do "something different," to wanting to serve their country as their parents and grandparents did, to, finally, wanting and sometimes needing the extra money. Each wants to belong to an organization he can take pride in and one in which he can also be proud of himself.

Why then, if this is the predominant reason, are there so many problems with enlisted personnel in the U.S. Army Reserve? Maybe we should consider the

possibility that the problems are not with the enlisted personnel but with us, the leadership, the officers and noncommissioned officers of the Reserve.

If our troops don't feel like they really belong, we might ask ourselves a few pointed questions:

When was the last time we conducted an in-ranks inspection; recognized someone in front of his peers; made an on-the-spot correction; counseled a soldier properly (one on one); spent motor stables in the motor pool with our troops; checked individual or squad training and coached or corrected the trainer to help him improve?

How many times have we arrived at a drill after our troops were already there; been afraid to check training because we weren't sure how it should be done ourselves; hesitated to go to the motor pool because it was too cold; cut ahead of our troops in a chow line; failed to make on-the-spot corrections because we were too timid or felt it really wasn't important? If we feel embarrassed by these questions, we are probably not alone. But why does this situation exist, and what can we do about it at our level?

Our troops want, expect, and are entitled to the very best leadership the Army can provide. The Army has seen fit to bestow the honor of leadership upon us, and only we can prove deserving of that honor.

Yet many times we spend a weekend drill in our office reading documents that have come in since the last drill, just trying to keep up with what's going on. With the limited amount of time available, we should be spending it with the troops to make sure they are proper-

ly trained and do our reading and paperwork somewhere else.

On too many occasions, a unit's leaders will show up on a Saturday morning and everything appears to be out of control—people running in all directions, no apparent organization or leadership. The only possible explanation for this type of situation is that those leaders did not properly plan the drill in advance. Planning for next month's drill should start at *this* drill and then must be refined throughout the month, including the ATA, until the actual drill. (Some activities will require two or three months of refinement.)

At other times, we have probably caught ourselves wandering around during a drill asking ourselves what we should be doing? If we're doing that, imagine what our troops must be doing and wondering.

Of course, we cannot change things we do not have the authority and responsibility for, but we can try to make our unit—squad or battalion—the best unit in the USAR. How? For starters, we might simply imagine ourselves going into combat. What type of leadership would we want then from our superiors? What kind of personal problems would we have? We should isolate each of these and many other questions and evaluate our answers to them. Then we should make sure that when our subordinates ask the same questions, they don't have to wonder about the answers, or about us.

Some Reserve commanders feel that if they're "good ole boys," all the troops will like them and do what they ask, so what's the problem? The problem is that being a "good ole boy" and being a leader are diametrically opposed to each other. The troops, with few exceptions, want a *leader*—someone who is firm, yet fair; someone who will share their hard times as well as their good ones; and, probably most of all, someone who will ensure that they get the training they will need to survive on the battlefield.

Instead, what do we give them? We give them management—we spend hours looking at the statistics, treating the symptoms of low percentages, trying to show our boss that when we raise the percentage in one or more of the areas, we really have control over our unit, and

promise him even further increases.

Naturally, we cannot completely ignore the areas in which we use statistics. On the contrary, as long as we are evaluated by them, we must be ever aware of them and work toward improving them. But if we fulfill our two basic responsibilities (not to be confused with priorities)—to accomplish the mission and look out for the welfare of our troops—the statistics, for the most part, will take care of themselves.

Some of us view our responsibilities for accomplishing the mission and also looking out for the welfare of our troops



as something of a paradox. Some of us are reluctant to insist that a certain task be done because we consider it unnecessary, an inconvenience to our soldiers, or we're afraid they will develop a dislike for us if we ask them to get dirty, wet, or sweaty, to perform repetitious training, or to do anything else they may not want to do.

But the mission must always come first. When we reschedule an FTX because of wet or cold weather, we place the comfort of our troops, and ourselves, ahead of accomplishing the mission. It is possible, of course, and necessary, to do both: We can conduct the FTX in the rain and cold and fulfill our responsibility to our troops by seeing that they have the proper clothing or equipment to keep them as dry and warm as possible—just as we would in actual combat. Are we so naive as to think that the next war will stop when it gets cold or rains? Or that

our troops will be able to survive in combat in these conditions if they have never trained in them? Aside from mere survival, our troops will be able to do effectively in combat only those things we have trained them to do in peacetime.

When we "fix" weapons qualification and PT test results because we do not want to see one of our soldiers transferred out of the unit or separated, we do him no favors. Is it better to allow him to mobilize with the unit and become a casualty because he cannot hit the enemy or keep up with the physical demands of combat, or worse yet, to cause other casualties for the same reasons?

## BETTER LEADERS

How can we make ourselves better leaders, and subsequently our units better units? The following are some suggestions:

First and foremost, we've got to decide for ourselves whether we want to be the type of leaders our troops will follow into combat—knowing that we could very well determine whether or not they will survive. If we stand up and say "Follow me," will they follow, or will they panic and run? They certainly will not follow us if we haven't trained them, cared for them, disciplined them, and gained their trust, confidence, and respect. We may respond to that statement with something like, "I'm not a combat unit. I'm support," or "We'll have plenty of time to do those things if and when we are mobilized." But, modern warfare being what it is, any unit can expect to perform a combat mission of some type, at one time or another. It may be only to defend a position 100 miles from the main battle area, but if we don't expect it and aren't training for it, we certainly are not providing the kind of leadership our troops will have to have to survive.

We must be current on the various types of mobilization, concepts, and missions. Certainly it will not take a declaration of war to mobilize our unit, nor will we have six months to a year to prepare for our mission upon mobilization.

Secondly, we certainly won't become that type of leader just by saying we want to; it takes hard, dedicated, sincere work,



and a true desire on our part. We can't do it by being "good ole boys," or by belonging to or condoning cliques within our organization. Nor can we do it if we are so complacent as to think we will never have to lead our unit in combat. After all, why do we have a Reserve force? Sure, we all *hope* we will never have to go to war, but there's a tremendous gap between hoping we won't and believing we won't, and in that gap are all those things we as leaders must do to help enable our units to survive on the battlefield once we have been mobilized.

Having said all of this, how can we get the trust, confidence, and respect of our troops? There are several ways:

**Lead by example.** Many authors have written about leading by example, but few have cited specific ways to do it. Here are some that can have a significant effect on how our troops view us, their leaders. Although we've heard most of them before, let's refresh our memory on how important they are:

If we want our troops to look sharp and be on time, then *we* should look sharp and be on time. If we want our troops in the motor pool at 0800, we should be there at 0755. If we want our troops to know first aid, we should know first aid and be willing to help them learn it. If we want our troops to qualify with their weapons, we should be in the first firing order, then visit each man on the firing line, observing his firing and reminding him how important qualifying is.

If our troops must train on a cold, rainy day, we should be as visible and interested in their training then as we are on a warm, sunny day. If our troops are eating MCIs, we should be eating MCIs. No matter what they're eating, when all of our troops have eaten, then we eat. When all of our troops have field jacket liners, then we draw ours. If they are guarding a perimeter, we should visit their positions and let them know that we know where they are and that they are performing a vital service. Nothing

replaces that feeling our troops have when they see us not only concerned about them and their training but also sharing it with them.

**Know ourselves and seek improvement.** Self-evaluation is one of the most difficult aspects of leadership, yet one of the most critical. Many of us advance in our civilian jobs and attend management seminars and graduate schools in various disciplines, but, by and large, we find the same principles do not apply to our military jobs. To offset this imbalance, we must constantly seek schools, seminars, and other training activities in the military environment that will keep us current.

Reading new field manuals on leadership, counseling, tactics, doctrine, operations, security, maintenance, and training, as well as exchanging information with our peers, is an alternative to these schools.

We must also evaluate what *we* look for in a leader, under combat conditions when our lives are in his hands, and then assess how we think we rate with regard to those same expectations. If we expect competent leadership from our superiors, we must ask ourselves whether our subordinates are getting it from us.

**Set high but attainable standards.** Can each of our soldiers perform his common *and* technical skills? If not, we must develop a plan, specific and attainable with a realistic timetable, that will bring each man up to proficiency in those skills and then follow it up with on-site supervision, coaching, and correcting.

To do this, we must first know how it should be done ourselves. We must burn the midnight oil, if necessary, then move the same process to small unit training. We must establish standing operating procedures (SOPs) for the way we want things done—from in-processing to squad, platoon, or company level training—then insist that it be done that way, every time, over and over, until it

has become second nature.

Do our troops know what our standards are on such things as appearance, conduct, and integrity? And do we "lead by example" in this regard or just pay it lip service?

**Be firm, yet fair.** When a corporal or sergeant violates the rules, does he get the same consideration (and punishment, if appropriate) that one of our fellow leaders would get? Do we have favorites and allow them to bend the rules while we look the other way, thinking no one will notice? (Let's not kid ourselves! Our soldiers are neither blind nor ignorant.) Do we enforce *all* the rules or just some of them? (Almost any soldier will tell you that he doesn't mind the rules of the military environment so long as he knows what they are and so long as they apply to everyone and not just to some.)

**Insist that our subordinates provide the same type of leadership.** Do our subordinates know what kind of leadership we want them to provide? Do we lead by examples that correspond to our words?

We need to talk with our subordinates to help improve communication and understanding. We need to walk the perimeter, or our portion of it, in a bivouac site to see if our soldiers have their tents up, have dry socks, have their sleeping bags, or are on guard duty as required. If our subordinate leaders don't know what we want, we have no one to blame but ourselves.

All of these things require effort, but they produce the most tangible results we could ever want. They save lives on the battlefield. And isn't that what it's all about?

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# REORG

**Brigadier General Wayne A. Downing**

Battlefield casualties are a stark reality of war, but the stringent demands of combat preclude sustained fighting in such vastly understrength units as two-man squads or eight-man platoons. In combat, U.S. Army infantry units instinctively and routinely tailor themselves into viable, capable formations as changes occur in their field strength.

These same reorganization techniques must be learned and practiced in peacetime training as well. There are two reasons why they must: First, the techniques for reorganizing are essential to the combat readiness of small infantry units—seriously understrength units cannot fight properly, and units must train as they are going to fight. Second, full-strength units in a peacetime training environment are as rare as they will







# N I Z I N G

be in combat. Even overstrength units like the Rangers and the 82d Airborne Division seldom, if ever, field full-strength squads and platoons for training.

Leaders are misleading themselves if they think they are conducting squad training with three-man squads or platoon training with ten-man platoons. Some type of training is being done, to be sure, but it is not small unit collective training on “nuts and bolts” subjects like battle drills and tactics in situational training exercises. Before training begins, therefore, grossly understrength platoons and squads must be reorganized so that the unit can train properly and realistically. And this reorganization must continue during the training day as a unit’s field strength continues to change. The entire leadership of a battalion, from the battalion commander through the fire team leaders, must know how their platoons and squads are to be organized when they have people missing.

I offer no cook-book recipes to be memorized or placed in notebooks (although the tables in this article might be put in a handy place as useful guidelines). Rather, I offer an approach to thinking through the challenges of reorganizing a unit whose strength is constantly changing to create organizations that will be able to accomplish their missions in combat.

The U.S. Army has two basically different categories of infantry—light and heavy. Each is organized differently and, to add a little challenge for infantry leaders, even the basic light and heavy categories have variations.

(The Army is currently experimenting with a third type—motorized infantry—but has not yet determined exactly how it will be structured. Motorized infantry has some of the characteristics of both light and heavy infantry. Although the reorganization of the motorized infantry platoons and squads are not addressed here, the principles presented can be readily applied to motorized infantry formations.)

The new Army of Excellence light infantry platoons and squads have three different organizations—pure light infantry, airborne/airmobile, and Ranger. Common to all of these is the nine-man rifle squad made up of a squad leader and two identical fire teams with a fire team leader, an automatic rifleman (AR), a grenadier, and a rifleman in each. In the pure light infantry and the Rangers, the rifleman can usually perform as a designated Dragon gunner if required.

The Ranger and airborne/airmobile units have weapon squads. The Rangers’ weapon squad is built around the M60 machinegun, which is the platoon’s long-range killing punch. The airborne/airmobile infantry units have two dedicated Dragon gunners and two assistant Dragon gunners in their weapon squads in addition to the M60 machinegun teams.

The number of M60 machineguns and their manning also differ among the types of light infantry. Only the Rangers retain three machineguns per platoon with the traditional three-man machinegun teams—gunner, assistant gunner, and ammunition bearer. The airborne and airmobile infantry have two M60 machineguns and a two-man crew for each. The pure light infantry has the same two-gun/two-man machinegun team structure, but their guns are located in the platoon headquarters.

All light infantry platoon headquarters basically contain the platoon leader, the platoon sergeant, and a radio-telephone operator (RTO). The Rangers have a medic assigned and are authorized an additional RTO (31C1V), who is usually present only for long-range communications when on independent platoon missions.

Heavy infantry comes in two types—Bradley and M113. Each has a platoon headquarters and three nine-man rifle squads. Each squad is subdivided into a vehicle crew and a rifle team.

The vehicle crew of the Bradley has three men—the track commander (who is usually the assistant squad leader or the squad leader), the gunner, and the driver. The less sophisticated M113 needs only a track commander (usually a team leader) and a driver.

The rifle team of a Bradley squad has six men—a squad leader, two automatic riflemen, one grenadier, and two riflemen, one of whom is a designated Dragon gunner. The M113 rifle team has seven men available to dismount—a squad leader, a team leader who can double as a grenadier, a machinegunner, an assistant gunner, an automatic rifleman, and two riflemen, one of whom can be armed with a Dragon.

The leaders of all these small infantry units must continually assess their situation to determine how and when to reorganize. The method of doing this is fairly simple, and it fits properly into the estimate of the situation that leaders



always make as they train or fight.

Reorganization, therefore, revolves around the application of five considerations:

**Step 1. Apply METT-T.** An analysis of the mission, the enemy, the terrain, the troops available, and the time available is the time-proven method of assessing a situation.

What is the unit's mission? Attack? Defend? Ambush? Establish an OP? A platoon leader must have a clear concept of the intent of both his company and battalion commanders. Squad leaders must have a similar grasp of the platoon and company situations. Only in this way can they counter the confusion and isolation inherent in intense combat and take advantage of any unforeseen opportunities for accomplishing the missions that may present themselves on the battlefield.

What type of enemy forces will the unit encounter? Light? Heavy? Guerrillas? Third World? How are they armed? What tactics do they employ? How will they react to contact with us? What is their expected mission? The answers to these questions will have a major effect on how a unit organizes and arms itself.

Where is the unit fighting? Forest? Desert? Urban area? What cover and concealment is available? What are the fields of fire for our weapons and for his? Avenues of approach? What is the weather now, and what is the prediction for 12 and 24 hours from now? What is the light data?

Troops available is the crucial question. Although present-for-duty strength determines how a unit reorganizes, it is not quite that simple. The leader needs to know not only how many soldiers he has available but also who they are—how well trained, how much experience they have had, who is reliable and who is not.

How much time is available before the unit moves out or before the enemy is expected to arrive? Is there enough time to train the unit or even brief the troops on a reorganization? It doesn't take long to orient well-trained and well-disciplined soldiers on a new situation and on their responsibilities and duties. Likewise, a good unit can accomplish a lot of high-payoff training in just a few hours. The point is that valuable time must not be wasted. Time will determine a leader's options as he reorganizes.

Once the small unit infantry leader has made his estimate of the situation using METT-T, he is ready to begin the actual reorganization.

**Step 2. Fill the key leadership positions.** Units even as small as fire teams will not function properly unless someone is in charge. Key positions must therefore be filled with soldiers who can do the job. On some occasions, leaders have to consolidate units because adequate leadership is just not available.

Because of the Army's two basic types of infantry, the key positions to be filled are not exactly the same. But all infantry platoons—light and heavy—must have at least a qualified platoon leader, a platoon sergeant, and squad leaders for all the squads that can be manned.

Light infantry units must have fire team leaders—the fighting leaders who maneuver their fire teams by their own personal, up-front example.

Heavy infantry units—M2 Bradley or M113—must have

track commanders. When the infantry dismounts, a qualified soldier must be left in charge of the vehicle—to move it and to direct its weapon systems—and another qualified leader must be in charge of the dismount element or rifle team.

**Step 3. Man the most potent, most applicable weapons.** The enemy and terrain will have a major effect on the weapons a leader chooses to man. Light infantry units fighting enemy armored or motorized forces will probably want all the antitank weapons they can get—Dragons, LAWs, M202 Flashes, and AT mines if in the defense. The same light infantry units fighting in the jungle against lightly equipped forces will most likely take no Dragons or AT mines, but AR men and riflemen will probably be at a premium.

Since the M60 machinegun is a principal weapon to light infantry units, seldom will those units fail to man all of their available M60s. To heavy infantry units, however, the M60 machinegun and the dismounted Dragon may be less important, especially if the units are employed near their carriers.

A leader's choice of soldiers to man the essential weapons is especially important. A machinegunner, a Dragon gunner, or an AR man must be capable of employing his weapon effectively.

**Step 4. Determine the minimum acceptable manning level for small units.** This is the crunch point. Units must

#### RIFLE SQUAD/TEAM FILL

POSITION	STRENGTH				
	9	8	7	6	5
<b>Light Infantry</b>					
Squad Leader	X	X	X	X	X
Fire Team Leader, A Team	X	X	X	X	X
Automatic Rifleman	X	X	X	X	X
Grenadier	X	X	X	X	X
Rifleman	X	X	X	X	X
Fire Team Leader, B Team	X	X	X		
Automatic Rifleman	X	X	X	X	
Grenadier	X	X			
Rifleman	X				
<b>Heavy Infantry (Bradley)</b>					
Squad Leader/Asst Squad Leader				X	X
Automatic Rifleman				X	X
Automatic Rifleman				X	X
Grenadier				X	X
Rifleman				X	X
Rifleman				X	
(NOTE: Assumes the three-man vehicle crew is fully manned.)					
<b>Heavy Infantry (M113)</b>					
Squad Leader		X	X	X	
Team Leader/Grenadier		X	X	X	
Machinegunner		X	X	X	
Assistant Machinegunner		X	X	X	
Automatic Rifleman		X	X	X	
Rifleman		X	X		
Rifleman/Ammo Bearer		X			
(NOTE: Assumes the two-man vehicle crew is fully manned.)					

Table 1



have well-thought-out guidelines for reorganizing before they go into combat or when they train. The following are some guidelines for both light and heavy infantry units, and the leader on the spot should be given the latitude to reorganize his unit on the basis of his estimate of the situation.

In light infantry units, a fire team must have at least four men—the fire team leader plus three team members. If the first fire team is filled, then it takes at least a two-man buddy team to make up the additional fire team, and one of these members must be capable of filling the role of the fighting leader, the fire team leader.

A rifle squad must have a squad leader and at least one full fire team—a total of five men, the squad leader and the minimum acceptable four-man fire team. If there are fewer than five qualified men, then it is not possible to have a squad.

As Table 1 shows, with five qualified men a light infantry

### LIGHT INFANTRY PLATOON FILL

FIELD STRENGTH	Platoon Hqs	Weapon Squad	Rifle Squads	Platoon Total
<b>Light Infantry (authorized 34)</b>				
34 or more	7		3x9 +	34 +
22 or more	4		3x5 +	22 +
17 or more	4		2x5 +	17 +
12 or more	4		1x5 +	12 +
Less than 12	No platoon can be formed— Cross-level with another platoon.			

#### Airborne/Airmobile Infantry (Authorized 39\*)

39 or more	3	9 + *	3x9 +	39 +
27 or more	3	9 + *	3x5 +	27 +
22 or more	3	9 + *	2x5 +	22 +
17 or more	3	9 + *	1x5 +	17 +
Less than 17	No platoon can be formed— Cross-level with another platoon.			

\*Includes full manning of the two-man Dragon teams in the weapon squads.

#### Ranger Infantry (Authorized 41\*)

41 or more	4*	10 + **	3x9 +	41 +
26 or more	4*	7 + **	3x5 +	26 +
21 or more	4*	7 + **	2x5 +	21 +
16 or more	4*	7 + **	1x5 +	16 +
Less than 16	No platoon can be formed— Cross-level with another platoon.			

\*Does not include additional RATELO (31C1V) in platoon HQ.

\*\*Accepts two-man MG teams instead of authorized three-man teams.

Table 2

squad is at minimum acceptable strength. Six men produce a squad with a five-man fire team—in this case with an additional AR man. When the initial four-man fire team is present, it takes at least two more to man an additional fire team. Seven or more men create a squad with two fire teams.

The weapon squad found in the airborne, airmobile, and Ranger infantry platoons must have a squad leader and minimally manned crew-served weapon teams. The weapon squads are very important in the light infantry, and many times

### HEAVY INFANTRY PLATOON FILL

FIELD STRENGTH	Platoon Hqs	Vehicle Crew	Rifle Team	Platoon Total
<b>Bradley-equipped (Authorized 32)</b>				
32 or more	5	3x3*	3x6 +	32 +
29 or more	5	3x3*	3x5 +	29 +
24 or more	5	3x3*	2x5 +	24 +
19 or more	5	3x3*	1x5 +	19 +
Less than 19	No platoon can be formed— Cross-level with another platoon if infantry is to be dismounted.			

\*Assumes situation demands a three-man vehicle crew; two-man crew is possible for added dismounted strength.

#### M113-equipped (Authorized 31)

31 or more	4	3x2	3x7 +	31 +
25 or more	4	3x2	3x5 +	25 +
20 or more	4	3x2	2x5 +	20 +
15 or more	4	3x2	1x5 +	15 +
Less than 15	No platoon can be formed— Cross-level with another platoon if infantry is to be dismounted.			

Table 3

soldiers will be shifted from the rifle squads to man the critical crew-served weapons.

It takes at least two men to operate an M60 machinegun properly—a gunner and an assistant gunner. An M60 must not be manned by only one soldier. And this goes for the mechanized infantry as well. A machinegun just doesn't work very well if only one man is dedicated to it. With two men, the gun performs adequately; add an ammunition bearer, and it works better still. (And that machinegunner should be made a corporal. He's an important soldier in a light infantry platoon with a great responsibility as a team leader; that responsibility should be recognized.)

In airborne and airmobile units, the weapon squad has two Dragon teams composed of a gunner and an assistant gunner. The minimum acceptable level of manning for this squad depends upon the situation. If there is a strong enemy armor threat, it should be fully manned—maybe even augmented with another ammunition bearer.

An airborne-airmobile weapon squad is authorized nine men and in a high threat enemy armor environment, all nine are needed to man the machineguns and the Dragons. In a low armor-threat situation, seven may be able to do the job—a squad leader, two machinegun teams of two men each, and two Dragon gunners without their ammunition bearers.

A Ranger weapon squad is authorized ten men. The minimum acceptable fill is seven—the squad leader and three, two-man machinegun teams.

Looking at manning a light infantry platoon (Table 2), a platoon (to be one) must have a platoon leader, a platoon sergeant (for sustained operations), and a radio-telephone operator. A platoon must have at least two squads, and in an airborne, airmobile, or Ranger unit one of them could be the weapon squad.

(If less than two squads are available, then it is not possible to have a maneuver element and a base of fire element and, therefore, not possible to have a platoon.)

Manning heavy infantry units is, of course, somewhat different (Tables 1 and 3):

The weapon systems on mechanized infantry vehicles, especially on the Bradley, and the need for instant mobility, usually demand that a full vehicle crew remain with each vehicle. The vehicle crew for the Bradley consists of three men—a qualified track commander (TC), a gunner, and a driver. The Bradley TC can be the squad leader or the assistant squad leader, depending upon the situation. Current thinking, though, is that the squad leader will dismount with the rifle team in most tactical situations.

There may be times, however, when the commander's METT-T analysis leads him to increase his dismounted infantry strength and temporarily leave the Bradley with a two-man crew, with the TC doubling as the gunner and the driver. The Bradley's weapon systems, its mobility, and its ability to conduct sustained operations definitely suffer with a two-man crew. Less than full vehicle crews also greatly limit the flexibility and responsiveness of a Bradley platoon in reacting to unexpected developments.

The M113 can get by with a two-man vehicle crew—the track commander, who is normally one of the squad's team leaders, and a driver. It is rare to cut the M113 crew down to a single man.

The rifle team that fights from the Bradley and that dismounts from either vehicle is composed of the squad leader (or assistant squad leader in some cases with the Bradley) plus at least a four-man team. As Table 1 indicates, if a unit cannot dismount at least five men, then a rifle team does not exist.

As a general rule, heavy platoons man all of their vehicles even though they may not be able to man all of their squads. The Bradley, and even the M113 with its M2 .50 caliber machinegun and M175 Dragon mount, provides an excellent base of fire. But in order to be a platoon, the platoon must be able to generate at least one dismounted rifle team. If the platoon cannot do this then it is no longer a heavy rifle platoon, although in the case of the Bradley it may become something else in terms of providing a base of fire for the company.

**Step 5. Cross-level as required, on the basis of the preceding guidelines.** The application of the rules produces different results with the different categories and types of infantry.

The pure light infantry, airborne/airmobile, and Ranger infantry are cross-leveled as depicted in Table 2, assuming that qualified soldiers are available to fill the leadership positions

and man the appropriate weapons.

For example, a pure light infantry platoon can obviously field a full-strength platoon if it has 34 or more qualified soldiers. But what happens if it has only 18? Applying the rules established in Steps 1 through 4, an 18-man light infantry unit can field a full platoon headquarters of seven men, to include manning the two two-man machinegun teams, plus two squads of five and six men respectively. But if a light infantry platoon has less than 12 men, then it is not possible to form a platoon with a maneuver element and a base-of-fire element. When this occurs, the company commander must cross-level with another platoon to form a unit capable of both fire and movement.

An airborne or airmobile platoon can field a platoon headquarters, a full weapon squad, and three rifle squads with at least five men each if it has 23 or more qualified soldiers. If an airborne or airmobile squad has less than 17 soldiers, it cannot perform what is expected of a rifle platoon and should be cross-leveled within the company to form one.

These two examples both assume that the leader's METT-T analysis has led him to fully man his crew-served weapons and that he has qualified soldiers to cross-level. If the small unit leader's analysis of the situation has led him to believe he can afford to man less than his full complement of crew-served weapons and still accomplish the mission, then he will have additional manpower to fill his rifle squads and keep his platoon intact.

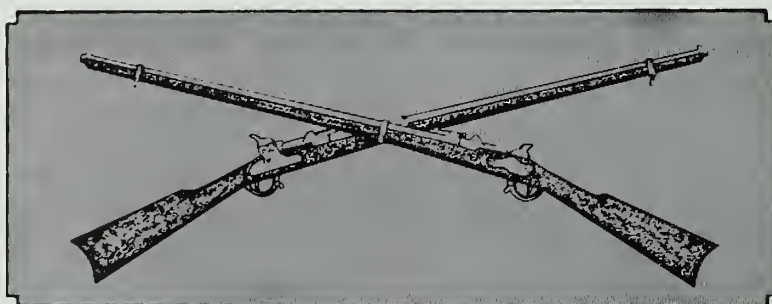
Heavy infantry units cross-level in a similar manner (see Table 3). A Bradley platoon of 29 or more qualified soldiers can fill all four of its vehicles with a full vehicle crew to man the potent weapon systems and maneuver the track and also fill at least three rifle teams with at least five men each. If this same platoon has 19 soldiers, it can fully man all four vehicle crews but can provide only one five-man rifle team on one of the vehicles. METT-T considerations will naturally produce slightly different organizations as trade-offs are made. The M113 platoon observes similar rules.

The five steps I have suggested here are merely guidelines that indicate a common-sense approach to finding a proper organization for combat and for training. At the very least, infantry leaders need to think about reorganizing, about how they will fight, and, accordingly, about how they will train to fight.

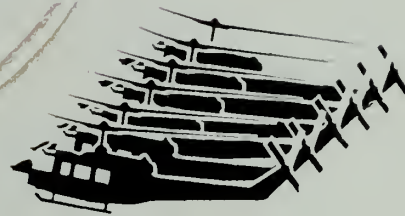
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**Brigadier General Wayne A. Downing** is Deputy Commander of the 1st Special Operations Command at Fort Bragg. Formerly, he served for several years in Army Ranger units, including command of the 2d Battalion, 75th Infantry and of the 75th Infantry Regiment.

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# RECONNAISSANCE PLANNING: A NEGLECTED ART

MAJOR DAVID J. OZOLEK



In countless cases, the dramatic success or dismal failure of a unit on the National Training Center's battlefield has been traced directly to the unit's patrol effort before the execution phase of its operation began. The reconnaissance effort for any attack mission must be an integral part of the operation and must be planned and supported with the same degree of detail as the scheme of maneuver or the fire support plan for that mission. The importance of the patrolling effort has been emphasized in after-action reviews, lessons-learned packets, and many articles written about the NTC, but many task forces still fail to send out a single reconnaissance patrol during their entire NTC training period.

Conversely, the infantry of the NTC opposing force (OPFOR) regiment conducts aggressive pre-attack reconnaissance patrolling. As a result, the thorough intelligence picture available to the OPFOR command group is often the key to the regiment's ability to bring its mass, speed, and firepower to bear in a well-orchestrated, violent attack. The OPFOR's standard reconnaissance procedures can easily be adapted and employed by any U.S. task force.

This reconnaissance effort consists of the following five phases, which are depicted in the accompanying sketches:

**Phase I:** Seize and maintain a line for the security force.

**Phase II:** Determine the enemy's front line trace.

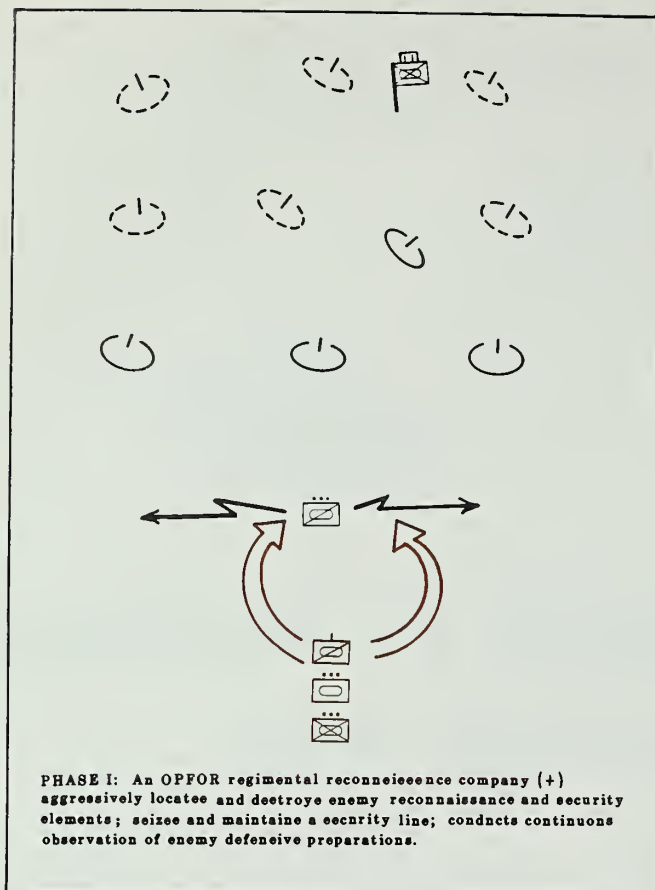
**Phase III:** Conduct a shallow reconnaissance (2-10 kilometers).

**Phase IV:** Conduct a deep reconnaissance (10-40 kilometers).

**Phase V:** Conduct continuous reconnaissance during the execution of the mission.

The patrol effort begins as the regiment moves into its forward assembly area to begin preparing for its mission. The reconnaissance company pushes as far forward as the enemy will allow, or to the limits of its supporting fires, to gain and maintain control of the terrain necessary for protecting the main force and supporting subsequent reconnaissance operations. If it encounters enemy reconnaissance or security elements, the company destroys these elements immediately to take away the enemy's ability to observe the regiment's preparations and also his early warning capability before he can use it to advantage. If necessary, the reconnaissance company is reinforced with tanks or infantry combat troops to repel any enemy counterattacks aimed at regaining this critical terrain.

Once this terrain has been secured and all enemy elements between the screen and the main force have been located and destroyed, Phase II of the reconnaissance operation begins. The reconnaissance company occupies hide positions as soon as it can so that it will be able to observe the enemy's main force elements. It also begins continuous surveillance of the enemy, with emphasis on determining where the enemy units are concentrating. Dust trails from vehicular movement or bar-



rier construction, for example, are tell-tale indicators of significant activity. During late afternoon, particularly if there are indications that feeding or refueling operations are taking place, motorcycle scouts are sent forward to determine what is taking place in the vicinity of these dust trails.

(By contrast, many of the task forces in training at the NTC seem to concentrate on only one task at a time and appear willing to tolerate enemy infiltrators during periods in which security is not the specified priority. Unit training and SOPs must stress the need to conduct counter-reconnaissance activities at all times, for the OPFOR's — or the Soviets' — relentless approach to reconnaissance will discover and exploit any lapse in security, no matter how temporary.)

## TASKS

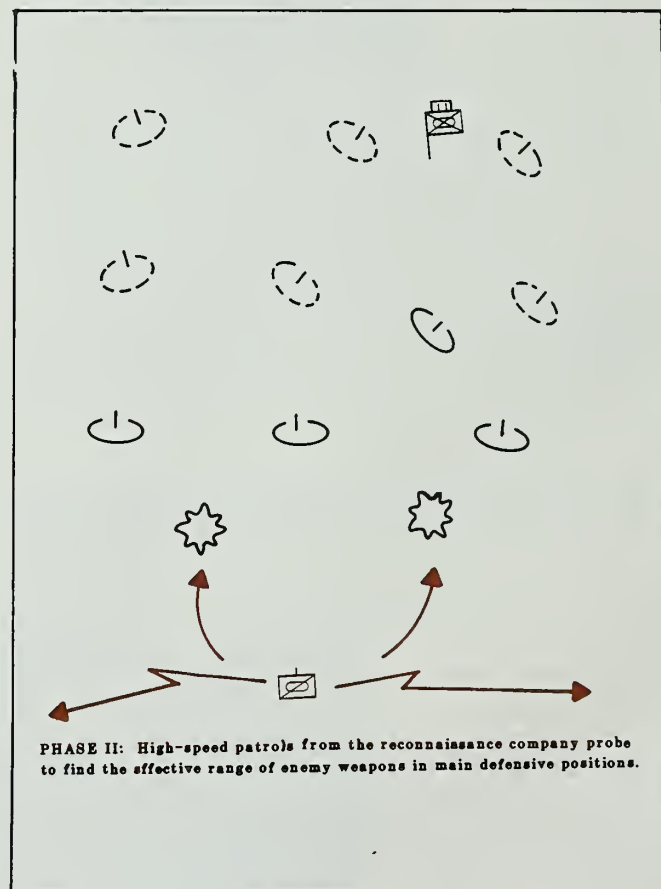
Three important Phase II reconnaissance tasks are done by the OPFOR just before dusk. First, high-speed patrols are sent forward to try to draw enemy fire at its maximum range. As soon as they see direct fire signatures, these patrols break contact and usually return with one very important bit of information—the limit of the enemy's forward ability to detect and engage armored vehicles. To do this, the patrols report their location at least every 500 meters until they make contact, so that if they are destroyed the reconnaissance company commander will know how far they got.

The second pre-dusk OPFOR event is the link-up of a ground surveillance radar (GSR) team with the company commander. The GSR co-locates with the reconnaissance command post

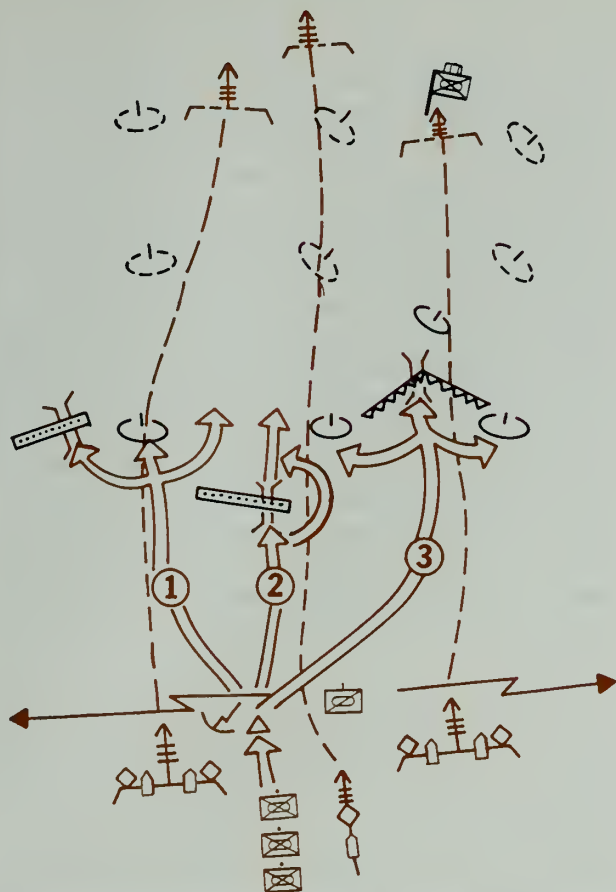
and works directly with the company commander. There are several advantages to this arrangement. First, it provides security for this valuable asset so that the team members can concentrate on surveillance without being distracted by local security requirements. Second, although surveillance priorities are assigned by the regimental S-2, the face-to-face contact between the radar team and the company commander allows the commander to do several things: direct the efforts of the GSR to confirm other possible sightings; monitor the progress of friendly patrols; and ensure that all avenues of approach are scanned to identify any enemy reconnaissance patrols moving toward the regiment. Most important, however, the reconnaissance company commander, as an experienced combat arms officer, can make sense of the hundreds of sightings a GSR team will make during the pre-attack phase. This allows him to adjust his reconnaissance effort as the enemy situation begins to become clearer and, if necessary, to modify (with the concurrence of the S-2) the surveillance plan to fit the situation and terrain.

The third important Phase II event that takes place at dusk is the establishing of wire communications between the regimental forward command post and the reconnaissance company CP. This allows direct, secure communications between the regimental intelligence officer and his reconnaissance and security elements. All spot reports from the reconnaissance company of the GSR are sent immediately to the regimental S-2, who analyzes the information as it comes in and uses it to help plan for the next phase of the intelligence effort.

If a second GSR team is available, the S-2 co-locates it with the regimental forward CP, once again for the security and







**PHASE III:** Infantry squad patrols dismount at checkpoints 1, 2, and 3; reconnoiter (on foot) enemy forward defensive positions on tentative MRB attack routes; locate battle positions, gaps, and obstacles; prepare and mark lanes; leave guide and security parties and return.

control advantages of co-location. The forward command post is in itself also a command observation post, usually situated so that the command group and staff can directly observe the battle area. This second GSR set is the S-2's personal eyes, which he can direct to areas of interest that develop as he receives more information. Additionally, the GSR can be directed into some of the deadspace of the forward unit caused by terrain masking. More important, it serves as a back-up to monitor any enemy movement behind the security screen. If the GSR with the reconnaissance company fails, this second set can quickly replace it.

By the time Phase III of the reconnaissance effort begins, the OPFOR regimental commander and his S-3 have devised the tentative concept of operation for the mission. This concept is based on a preliminary analysis of the mission, early enemy information, the terrain, and the assets available. Each of the regiment's battalions is assigned an axis of advance and objectives. Each battalion provides at least one patrol to the regimental S-2, who assigns that patrol a route reconnaissance mission that covers the same ground its parent battalion will cover during the maneuver phase of the operation.

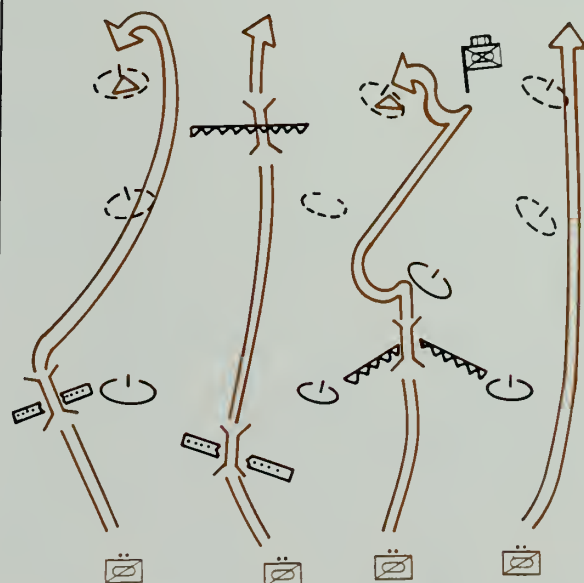
These patrols typically consist of a squad of infantry and an armored carrier. Depending upon the particular situation, the squad may be accompanied by a tank or a BMP that has a tank-killing capability. After a personal briefing by the regimental S-2, the patrols report to the reconnaissance com-

pany commander at his CP, where they receive a final update on the situation forward of the lines and coordinate for support and re-entry.

Once forward of the reconnaissance company, the patrols send their important spot reports or pre-arranged location reports to the commander on the reconnaissance company net, which the S-2 monitors. This reporting procedure has several advantages: First, the reconnaissance company continually monitors the activity of all the patrols so the commander does not have to be briefed on the results of the individual patrols before his company moves out on its Phase IV deep reconnaissance mission.

Next, since all elements on the screen know what is going on with the friendly elements forward, it is much easier for them to sort out friendly from enemy patrol activity. Finally, the patrols can normally use their radios on low power, decreasing the possibility they will be monitored or detected. In addition, specified sections of the reconnaissance company may be assigned to answer the traffic of an individual patrol. This disperses the electronic signature of the company and helps keep the important CP location from being identified and targeted.

The patrols initially move forward mounted to the point where the Phase II high-speed patrols drew long-range fire earlier. Here the infantry dismounts and moves forward to conduct a close reconnaissance of the enemy's positions and barriers. Their armored support element overwatches from its position and surveys the enemy's positions with the vehicle-mounted telescopic and night vision systems. The vehicle can also act as a relay for the dismounted element and, when ap-



**PHASE IV:** Reconnaissance company sections infiltrate through gaps between forward battle positions and lanes; infantry patrols have cleared through obstacles. Sections conduct deep reconnaissance on tentative attack routes to locate defensive positions in depth, C<sup>3</sup> facilities, and critical targets. Obstacles in depth are located, reported, breached, and marked.

**PHASE V:** Reconnaissance company establishes deep OPs, occupies possible subsequent enemy battle positions, on order destroys enemy C<sup>3</sup> or critical assets. Conducts continuous reporting on enemy displacements as the battle progresses.

appropriate, can provide fire support, long-range reconnaissance by fire, or a diversion. If the dismounted element is killed or captured, the carrier team can render at least a partial patrol report, and some information is always better than none at all.

The dismounted element is sometimes called upon to perform other clandestine tasks in addition to information gathering. It can breach and mark lanes in the enemy's obstacle system, for instance, or it can emplace range markers so that the maneuver commanders know when to expect enemy fire and when they themselves can begin to engage the enemy effectively. Stay-behind elements are often left at key locations to continue to observe enemy activities or to secure key terrain or obstacle breaches. They can also disable enemy systems by stealth, preferably in a way that will not be discovered until each system is needed. (In the real world, an explosive charge or solid obstruction in the barrel can be used to destroy a gun tube when the weapon is fired. In the MILES world, a roll of toilet paper or an empty sand bag can block the breech-mounted laser and effectively take the system out of action.)

But the most important mission for the patrols is still information gathering. The patrols are trained, and reminded, to look for specific key indicators that can help the S-2 determine the enemy's concept. These indicators include such basic items as gun-tube orientation, extent of position preparation, range to obstacles, and location of range or sector markers such as panels or chemical lights.

When a patrol returns, its members are debriefed three times. The first debriefing takes place at the reconnaissance company CP. The commander is not as interested in where the enemy is as in where he is not, because the next mission for the reconnaissance company will be the Phase IV infiltration and deep reconnaissance, in which the company will use the gaps the dismounted patrols have found in the enemy's forward battle positions to move undetected and gather intelligence in the depth of the enemy's defenses.

The second debriefing, which takes place at the regimental forward CP, is conducted personally by both the S-2 and the S-3. The S-2 concentrates on putting together an accurate enemy picture. Since by this point he knows the general locations of the enemy company-team units and specifically what each location contains, he can begin to account for all the elements the order of battle dictates that the enemy have. By using a template of the enemy's postulated tactical doctrine, he can determine where missing enemy units logically should be. These suspected locations are telephoned forward to the reconnaissance company to become checkpoints for its deep reconnaissance mission. The S-3 is interested in hearing the account first-hand from an operator's perspective. He uses this information to confirm or adjust his tentative plan in preparation for a final briefing of the line company commanders shortly before attack time.

The final debriefing takes place at the CP of the patrol's parent battalion commander. Here again, exact detail is important to the final formulation of the battalion commander's scheme of maneuver. As a final check, the patrol leader rides in the loader's hatch of the commander's vehicle to point out physically the locations of things he found the night before. The other members of the patrol may be placed in the loader's

hatches of company or platoon commanders' vehicles to provide face-to-face information for the sub-elements.

Phase IV, the company's infiltration and deep reconnaissance, begins either two hours before the attack or two hours before dawn, whichever comes first. (Since this is primarily a mounted operation, it must be conducted during pre-dawn darkness. Two hours of planning time has proved to be the best, both for ensuring that the company's information will be virtually current at attack time and for allowing sufficient time for the penetration before the attack begins.

The first tasks for the company in Phase IV are to confirm the location of gaps between enemy battle positions, to widen the breaches the dismounted patrols have opened in the enemy's barriers, and to make additional breaches if they can. Next, the company covers the assigned battalion's attack routes behind the enemy's forward positions and reports, clears, and marks lanes in any deep barriers. The company also reconnoiters the positions the S-2 has projected for likely enemy positions and searches all key terrain features for enemy preparations.

After completing these first critical information-gathering tasks, elements of the company may perform other combat missions. Key terrain features in the depth of the enemy's defenses can be occupied and denied to him once the maneuver phase of his defense begins. Often the enemy's defensive concept is totally disrupted when he finds he has to fight for a piece of terrain he expected to be his, while simultaneously being pursued at high speed by the regiment's main force elements.

The elimination of key enemy assets such as command posts or fire support elements is another common mission for the reconnaissance company. Usually these elements are not destroyed by the hidden company sections until the attack actually begins, thus increasing the effectiveness of the attack by disrupting the defender's command, control, and fire support at one of the battle's most critical moments and allowing him no time for recovery.

As with the shallow reconnaissance effort of Phase III, however, the primary mission for the company in Phase IV is still deep information gathering. By going deep behind the enemy, often as far as 25 to 40 kilometers (many times to positions beyond pre-battle radio range), reconnaissance elements can give important information on the enemy's displacements once he begins maneuvering. As the regiment comes within radio range of the deep elements, these spot reports allow the S-2 to keep track of enemy locations and strength, and allow the regiment to isolate, pursue, and destroy the enemy in detail.

The final phase of the reconnaissance effort takes place during the execution phase of the operation. (Reconnaissance does not cease until the last enemy element has been hunted down and destroyed.) During the attack, a well-organized spot report system is required. All enemy contact and all enemy major system losses are reported immediately. The S-2 keeps a running tally and constantly compares the enemy's losses to what the order of battle and the reconnaissance effort have shown that he should have. Because the S-2 continuously updates the command group on the expected enemy combat power at a given time, he can advise either picking up the pace or in-



creasing caution, depending on the risk the commander is willing to accept and the current combat power ratio.

The S-2 personally rides into the attack in the S-3's combat vehicle, while the BICC (battlefield information control center) officer (or assistant S-2) and the assistant S-3 control the TOC operation. Typically, the regimental commander and the fire support officer ride on the main attack axis, while the S-2, the ALO (air liaison officer), and the S-3 follow the supporting attack. This dispersal offers the command group greater observation of the battle and control of the regiment, allows the commander to concentrate on fighting at the decisive point, and enables the combat staff to make knowledgeable recommendations to the commander.

This simple, but aggressive OPFOR patrol effort can easily be transformed to fit the U.S. task force structure: The OPFOR reconnaissance company becomes the scout platoon, and the subordinate OPFOR battalions become the company teams. With a little practice, any unit can apply this "combat-proven" system and achieve the benefits accurate intelligence offers the maneuver commander.

But more important than the mechanics of this particular system are the principles that must govern pre-attack patrolling. First, an effective reconnaissance plan must be aggressive. Units must actively seek out detailed information on

the enemy in their sectors instead of simply waiting for reports from their higher headquarters. Next, patrolling must be continuous. The unit must have early information to facilitate planning and current information to allow for a constant revision of its plans as the time for the attack approaches. Finally, the reconnaissance effort must be redundant. All available systems must be used and must overlap to make sure every possible bit of information on the enemy is discovered and used to advantage.

Our doctrine is most effectively implemented when a high-resolution picture of the enemy is made available to the lowest possible level of command. The commander who hesitates to patrol aggressively because he is afraid of losing a few key men—and who therefore enters combat with less than a complete idea of the enemy's situation—is going to end up losing far *more* men and perhaps the battle as well.



**Major David J. Ozolek**, shown here in the uniform of the opposing forces regiment at the National Training Center, served as S-3 of the regiment and also as S-3 observer-controller of the NTC's operations group. A 1970 ROTC graduate of John Carroll University, he is now Public Information Officer at Supreme Headquarters Allied Powers Europe.

## SWAP SHOP

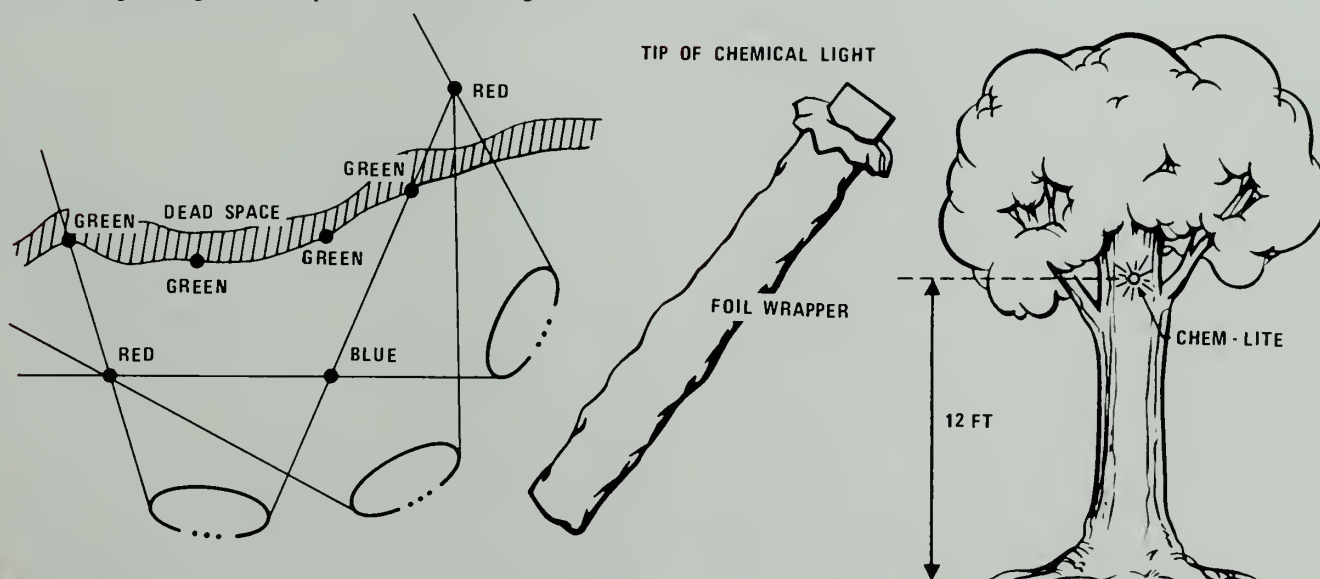


Chemical lights can greatly improve a defensive position at night: They can be used to clandestinely mark target reference points (TRPs), deadspace, and known avenues of approach.

These lights can also be used to make a combined height reference and aiming point. Since the tendency of many soldiers is to aim high at night, such a point at a known height off the

ground will enable soldiers who do not have night observation devices to keep their fires low enough.

Chemical lights in different colors can also be used to delineate sector responsibility and to augment other control devices for night firing.



(Contributed by Captain Timothy L. Canty, Company B, 1st Battalion, 32d Infantry, Fort Ord.)

# Infantry In Action



## A FOOT A DAY IN COMPANY A

**BRIGADIER GENERAL FRANK H. LINNELL**  
**UNITED STATES ARMY (RETIRED)**

*The Company A of the title is Company A, 4th Battalion, 31st Infantry Regiment, 196th Light Infantry Brigade, Task Force Oregon, III Marine Amphibious Force, Military Assistance Command, Vietnam.*

*The time period is roughly from April 1967 to November 1968. The place, Binh Son District, Quang Ngai Province, Republic of South Vietnam.*

*The title does not refer to the slowness of Company A's move-*

*ment but to the daily risk to the company's men from Viet Cong mines.*

*It is a story of bravery, tenacity, patience, ingenuity, generosity, compassion, and danger, but most of all, soldiering.*

*From few records, this story is a recollection by the brigade commander at the time.*

In the spring of 1967, the North Vietnamese Army had infiltrated the northern provinces of South Vietnam (RVN) in such numbers that the U.S. Marines, the U.S. ground forces in the provinces, were hard put to defend their air and ground bases. The Marine commander, Lieutenant General Lew Walt, proposed to the overall American commander, General William Westmoreland, U.S. Army, that he (Walt) move his 1st Marine Division from the two southern provinces, Quang Ngai and Quang Tin, north to the area of Danang. Thus, the division would replace portions of the 3d Marine Division so that those units could thicken the U.S. ground forces at the border between North and South Vietnam.

Westmoreland agreed and formed a provisional "division" with the 1st Brigade, 101st Airborne Division; the 3d Brigade, 25th Infantry Division; and the 196th Light Infantry Brigade. Augmented by separate units of artillery, engineer, signal, and support troops, this division was named Task Force Oregon (the commander, Major General William Rosson, being from Oregon).

In April, the 196th Brigade was flown from Tay Ninh, not far from Saigon, to the Chu Lai combat base in Quang Tin Province. There, augmented by additional infantry (1st Battalion, 14th Infantry) and armored cavalry (2d Squadron, 11th Armored Cavalry), it relieved in place the 1st and 7th Regiments of Marines. The 3d Battalion, 4th Infantry, down

from the Pleiku highlands, replaced the 5th Marines. The brigade from the 101st Airborne Division acted as a mobile strike force.

The three brigades, having dissimilar missions, acted as task forces and, though cooperating with each other and with U.S. and Korean Marines and the Army of Vietnam, each went about its own business.

The business of the 196th was to protect the Chu Lai air base and prevent the destruction of the 100 or so airplanes and another 100 helicopters positioned there; to locate and destroy hostile forces within the tactical area of operation; and to protect the Vietnamese people living in the area from the Viet Cong and the North Vietnamese.

Before the 196th arrived, the Marines, who had been in the area for about a year and a half, had performed these same tasks. In doing so, they had built some battalion camps and company strongpoints. In some haste, the 196th relieved the Marines throughout their tactical area of responsibility; but, because there were far fewer soldiers than Marines, the defenses of the 196th were thinner and the strongpoints more scattered. As an example, the 4th Battalion, 31st Infantry (Polar Bears) with four rifle companies replaced two Marine battalions with six rifle companies. Also, the Marine rifle companies had been far larger than those of the light infantry.

The situation of the 4th Battalion, 31st Infantry in the latter



days of April 1967 was as shown on the map. One company (D) south of the air base protected against infiltration into the base and patrolled incessantly for VC raiding parties. The remainder of the battalion, operating from fairly comfortable company-sized strongpoints (flimsy shacks and floored tents, latrines with roofs, and mess halls with screens) also patrolled vigorously throughout their assigned areas. From April until June, Company A patrolled to its east and south, by foot, by APC (borrowed from the cavalry), and occasionally, by small helicopter lifts from point to point (called "Eagle" flights).

The terrain in the Polar Bears' area was rolling country, interspersed with many ponds and streams, heavily wooded in spots with open areas of pasture, rice paddy, and cactus. There was fairly good visibility throughout from observation points on high ground. The roads were dirt and, in the dry season (which this was), were trafficable to anything on wheels or tracks.

Unfortunately, the VC had no difficulty in planting mines at night and so, at daylight, every foot of road south of battalion headquarters had to be swept before vehicles could go over it. Many mines were missed, though, and trucks were blown up. (The Polar Bears named the road to Company B "Thunder Road.")

Except for the mountain to the east, the entire area was full of hamlets, which in Vietnam could be one or two thousand people. The great majority of these people wished only to be left alone. But the VC's attitude toward the villagers was: "If

you're not with us, you're agin' us," so the people had little choice but to support the VC.

The Polar Bears thus lived and soldiered among thousands of people, all dressed alike, most looking alike, and none of whom could be identified as friendly or enemy. Most of these people farmed and some had small businesses. (A patrol in the middle of nowhere in a chow break might be approached by little kids or old ladies selling ice cold Cokes.)

The closest friendly forces, the Korean Marines, were not actively patrolling and, at night, buttoned themselves into their heavily bunkered perimeters and fired flares.

By June, the Viet Cong night raiders had made the corridor between the Koreans and Company B a regular route to the river. Being on the glidepath into the Chu Lai air base, they could shoot at U.S. aircraft at will and go up and down the river banks.

The commander of 4th Battalion, 31st Infantry, Lieutenant Colonel Charles R. Smith, prodded by the brigade commander to take this country back from the Viet Cong, asked for Company D from the north side of Tra Bong River. He got it. The Gimlets of the 3d Battalion, 21st Infantry took over from Company D, which moved south of the river, and Company A prepared to move to "Alpha Hill."

Some time in June, Company A was lifted onto Alpha Hill by Hueys and "Hooks" (CH-47As). Captain Edward F. Hill had planned the organization of the strongpoint in detail. By nightfall, he had some strong bunkers under construction, his mortars and recoilless rifles were sited in, and the soldiers were enjoying a hot supper.

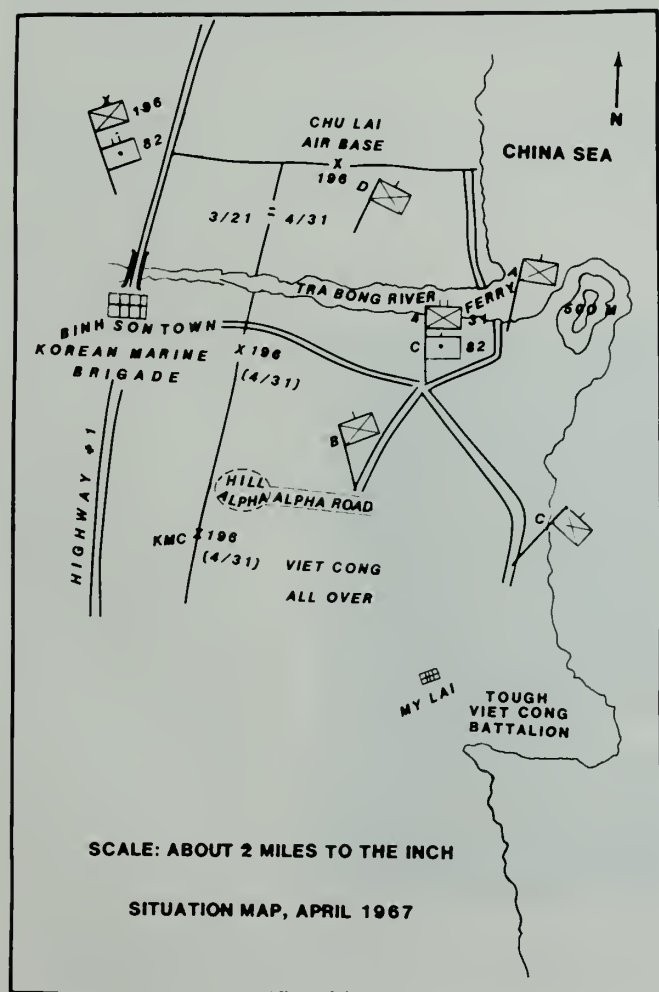
The Polar Bears, though, had sat right down on the Viet Cong's main line into downtown Binh Son. The VC, realizing that they would have no base of operations if the U.S. companies kept on leap-frogging to the south, decided to fight for Alpha Hill.

An American rifle company, reinforced by all the fires available from battalion and brigade artillery and from gunships (Huey Bs and Cs) could hold out against any amount of lightly armed infantry. But at night, especially on moonless nights, the Viet Cong could approach close enough with recoilless rifles, rocket launchers, and light mortars to harass the defense and cause casualties. If they wanted to shoot back at the VC, all of the defenders obviously could not go to ground in bunkers. So there *would* be casualties.

As with all other company commanders on their own in this type of situation, Captain Hill could not sit back and be shot at every night. He decided to patrol vigorously in the daytime to catch infiltrators "laying up" and to set out ambushes at night for the VC working around his perimeter. The local enemy were numerous and bold, and they were expert demolition men.

The tactical area of responsibility of Company A was so large that the VC could move fairly freely and did so, planting mines of all types in every place an American patrol might conceivably venture.

Every day, in every direction, squad and platoon patrols searched out the ground yard by yard. They caught, captured, or shot some Viet Cong almost every day but unfortunately had continuing casualties from antipersonnel mines. Most were



trip-wire-operated U.S. grenades that had been either lost, abandoned, or stolen. So the temper of this little war flared. The VC got Company A by day, and Company A got the VC by night, but not enough of them.

The brigade sent two searchlights to the company. Aligned with a machinegun, the searchlights could cover concealed routes to Alpha Hill. The defense of the hill was made more difficult by homeless, burned-out Vietnamese who built shelters as close to Company A's wire as they could (for protection against their own countrymen).

Battalion headquarters helped Company A move these waifs and strays out of the line of fire, but they were never wholly out of it and suffered their casualties from "overs" and "shorts." The company medics did the best they could for these innocent bystanders and evacuated the seriously wounded out with the wounded soldiers.

Experience throughout the rest of the brigade had shown that the sooner these company "forts" were connected by roads, the more secure each company would be. Armored vehicles could patrol and ambush, even at night; vehicles using lights could surprise infiltrators (even mine planters); and trucks could take over supply and evacuation tasks from helicopters.

So Colonel Smith, with some brigade engineers, built a road from Bravo to Alpha and used it day and night. A "deuce and a half," well sand-bagged, could stand a large explosion and still make it on in. So the fight changed from a fight for Alpha Hill to a day and night skirmish for Alpha Road.

Since Alpha Hill was a secure base and Alpha Road was used around the clock, the Viet Cong could no longer operate in that area.

In the middle of August, the brigade commander spent a morning with the men of Company A and wrote a few words about it in a letter to his wife:

*This morning I spent with A/4/31 on what's known as "a*

*detailed sweep." We found all kinds of things, including three grown-up men who, carrying grenades, ran away and were shot. Two killed, one wounded—he was a VC hamlet chief.*

A few days later—noting that the enemy was "almost completely stocking his arsenal of mines and booby traps from U.S. sources"—he put out a letter to the brigade listing ways to prevent this:

- *Strict control of the issue and turn-in of ammunition to individual soldiers, vehicles, and bunkers.*

- *Disciplined destruction, salvage, or turn-in of used materials that can be used in any way to fabricate explosives.*

- *The crushing of every tin can that can be used to fabricate explosives—beer, pop, food—every can.*

- *The reporting of time and location of every high explosive dud—air-dropped or otherwise.*

- *Strict and thorough police of every battlefield, camp, and bivouac area.*

By the end of August, although Company A's private war was not over, it had died down to the level where the soldiers no longer counted on losing "a foot a day."

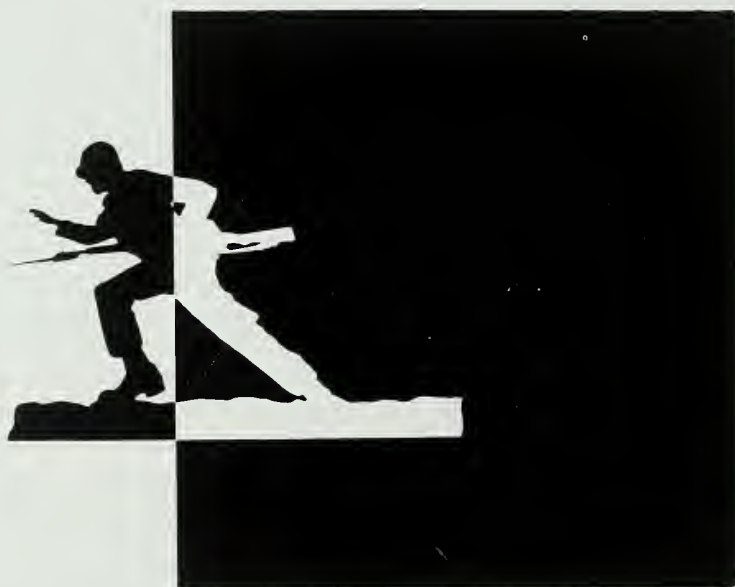
During this entire operation, many men of Company A were wounded or killed by mines and booby traps—60, more or less. Some others felt the sting of small arms or rocket-propelled grenades, but their main hazard was the antipersonnel mine.

Yet, day and night, for more than 60 days, these good soldiers still humped it through the woods and fields, *knowing* that the next step might be their last. Brave men!

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**Brigadier General Frank H. Linnell**, USA Retired, is a 1941 graduate of the United States Military Academy. During his career, he served in New Guinea, Luzon, Japan, Panama, Korea, Santo Domingo, Vietnam, and Germany in a variety of jobs from platoon leader on up. He was commanding general of the 196th Light Infantry Brigade in Vietnam.

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# TRAINING NOTES



## Sniper-Observer Teams

CAPTAIN JAMES W. BOWEN

One of the most potentially valuable but most overlooked tools available to today's commander is the sniper-observer team. U.S. Army doctrine concerning the employment of snipers dates back to 1969, and while Training Circular 23-24, *Sniper Training and Employment*, contains pertinent information, much of it has been rendered obsolete by advances in equipment and technology and changes in doctrine and the attendant tactics.

Recently, the 2d Battalion, 325th Infantry developed and tested an advanced program that was designed to create highly-trained and effectively-equipped sniper-observer teams. The 82d Division has since adopted the program for use throughout the division.

In developing the program, the leaders of the 2d Battalion, 325th Infantry felt that any sniper organization should be concerned as much with observing and reporting enemy activity as with shooting. Accordingly, their answer to the organizational problem was to form, train, and equip an 11-man sniper-observer squad (from the battalion's own resources) to augment the scout platoon of the battalion's combat support company. Now, each of the infantry battalions in the division has one of these squads, which consists of a squad leader and five two-man sniper-observer teams.

The overall concept behind the training and selection of the members of these squads is driven by a desire to find and field self-reliant, well-trained, and men-

tally and physically tough soldiers to increase the combat capability of the battalions.

For too long, sniper training had been "shooter" training only. This overemphasis on marksmanship had resulted in soldiers who could shoot well on a rifle range but who could not adequately perform the doctrinal missions required of snipers. The division's solution is a training program in which specially chosen soldiers—each of whom is a volunteer—attend an Army Marksmanship Training Unit (AMTU) sniper course to hone their shooting skills and become versatile combat snipers. But first, they must go through a tough selection process, which consists of four phases:

**Records Screening.** A thorough check of the soldiers' records and psychological screenings are conducted to ensure that the soldiers allowed into the program have no history of substance abuse, disciplinary action, or mental instability.

**Recommendation by Company Commander.** To be accepted for the program, a soldier must be recommended by his company commander.

**Selection Course.** This is a five-week course, part of which is conducted away from Fort Bragg in North Carolina's Uwharrie National Forest. The part of the training program in that location includes instruction in land navigation, stalking, mission planning, intelligence, communications, ballistics, rappelling, and air assault operations. The sniper-

observer candidates are then brought back to Fort Bragg where they learn how to call for fires from a supporting 81mm mortar unit and how to direct close air support strikes by A-10 aircraft. The final part of the course is a demanding four-day land navigation exercise conducted both in the national forest and on Fort Bragg.

**Commander's Board.** Finally, the would-be sniper-observers take a written test on all of the subjects covered in the course and submit peer evaluations on the other candidates. Then they appear before an assessment board chaired by the commander of the battalion conducting the training. The board's purpose is to test each soldier's ability to think and act under pressure.

The 11 members of a battalion's sniper-observer squad are then selected on the basis of the results of the land navigation exercise, the peer evaluation, the written test, and the board's evaluation.

Follow-on training for the members of each squad includes the AMTU sniper course and weekly sustainment firing periods. (The 2d Battalion, 325th Infantry feels that at least 50 rounds per man per week are needed to maintain its standard of a first-round kill at 350 meters and a second-round kill at 600 meters.) Some of the sniper-observers may also attend the counter-sniper course at Fort Meade, Maryland.

Sniper-observer teams are used as of-



ten as doctrinally feasible. When not employed, the squad leaders plan training that will sustain and add to the skills each man developed during the course.

The three missions considered most productive in combat situations for the sniper-observer teams are related to defensive operations—in a covering force, in the defense of the main battle area, and in a stay-behind role following a delay or withdrawal by the parent battalion.

With a covering force, the teams can delay or disrupt an attacking enemy by directing their fires at such key enemy personnel as tank commanders and unit leaders. They can also observe and report enemy troop concentrations, or they can direct their own artillery and other supporting fire against enemy formations. (The latter method of employment is particularly useful at choke points, which are abundant in Europe as well as on other

potential battlefields throughout the world.)

Within a main battle area or in a stay-behind situation, the sniper-observer teams perform similar missions. Urban terrain, in particular, lends itself to the employment of snipers. The teams can also be used to effectively cover obstacles and, in certain situations, to force enemy mechanized units to dismount.

## OTHER MISSIONS

These three missions certainly are not the only ones that sniper-observer teams can perform. The teams can be used in raids, for example, and in other similar offensive operations. In fact, a wide range of possible uses is available to a commander.

In developing this sniper program, the 2d Battalion, 325th Infantry did find that

while the team members should be equipped to the fullest extent possible with their normal individual equipment, some special equipment is essential for each team—a sniper rifle, a set of binoculars, and a radio. In addition, some other equipment will make the teams even more effective—a spotter scope, a laser rangefinder, secure communication equipment, and special camouflage uniforms.

Unfortunately, although the Army's current M21 sniper weapon system, which consists of an accurized M14 rifle with an ART-11 scope and an M49 spotter scope, may be an acceptable general-purpose system, as a sniper system it has a number of deficiencies. For example, a user cannot perform any maintenance on the system that requires disassembly of the rifle. Also, the scope cannot be taken off the rifle without the loss of zero, and this makes it impractical for use by an airborne sniper-observer team.

(The 2d Battalion, 325th Infantry tested an alternate weapon, the McMillan M82, which is currently used by selected units within the Department of Defense. The battalion found this an excellent weapon that increased the combat capabilities of its sniper-observer teams.)

The AN/PRC-77 radio, while not ideal, is widely available, and it is adequate under most circumstances. When used with VINSON equipment (which gives it a secure communication capability), a long whip or field expedient antenna, and a headset, it enables an observer to report intelligence data, receive missions, or adjust fire on targets. The headset frees the observer's hands for using his spotter scope, laser rangefinder, or binoculars.

As part of the program, each team member constructs his own "Ghillie suit," a special camouflage uniform made from a fatigue uniform reinforced in the front to allow sustained low crawling without damage and with a net attached to the top and additional camouflage on the back. The team members put on these suits when they arrive at their objective rally point (ORP) and wear them on their approach to and while in their firing and observing positions.

Future implementation of the program



includes leader training in sniper employment, procurement of another sniper rifle, and additional selection courses to maintain fully manned and trained sniper-observer squads. The division has submitted an MTOE change for a nine-man sniper-observer squad and has strongly recommended that an 11-man squad be included in Army of Excellence organizations. (More detailed information on the selection, training, and use of sniper-

observer squads can be obtained from the Commander, 2d Battalion, 325th Infantry, 82d Airborne Division, Fort Bragg, North Carolina 28307.)

The dividends to be gained from developing sniper-observer squads far outweigh the resource requirements they demand in terms of manpower spaces, equipment, and dollars. By providing a commander with an additional combat capability, these squads increase the

readiness of any infantry battalion to fight and win on a modern battlefield.



**Captain James W. Bowen**, a 1982 graduate of the United States Military Academy, was Assistant S-3 of the 2d Battalion, 325th Infantry when the sniper-observer program was developed and is still involved in the program.

# Tactical Logistician

LIEUTENANT COLONEL WALTER J. CRIMMINS, JR.

Our brigade and battalion S-4 officers, along with the others in the logistical chain, are responsible for fueling and fixing our vehicles and weapon systems and for feeding and arming their operators. On the battlefields depicted in Field Manual 100-5, these logisticians will have to accomplish their tasks in a variety of combat operations by determining how to get what is needed to the point where it is needed at the time when it is needed. They must be able to select the correct course of action and carry it out under adverse conditions as well.

Unfortunately, our normal peacetime training leaves tactical logisticians less than fully prepared for such combat situations. Both peacetime constraints and training emphases hinder their on-the-job development and training. In particular, three aspects of training limit the kinds of problems an S-4 must solve and may even prevent him from considering other problems.

First, logistics for any field training exercise (FTX) is normally limited to what is necessary for the play of the exercise. This aspect of the problem acknowledges that logistical assets are too precious to be prepared, expended, or used when they are not needed. It also acknowledges that manning levels are not high enough to allow fictitious operations to be

planned and monitored when there are actual ones that must take place. Thus, the emphasis is usually placed on supporting a particular FTX, with little question of how that support would be done in combat. Whatever support is not needed is never addressed or planned for. Although this conserves precious assets, it also limits opportunities for planning and executing the handling of these assets.

## LIMITED

The second aspect of the problem concerns the physical limitations of today's training areas. This simply acknowledges that maneuver units cannot conduct offensive and retrograde movements over the distances the writers of the FMs envision for the future battlefields. In addition, maneuver units in an FTX rarely employ all forms of combat support and combat service support. Live fire events are usually limited in scope and duration, and this means that S-4s and the CSS system are less than fully exercised.

During most field problems, S-4s are rarely required to operate at extended distances from their supply base and their support units, or with a challenging array of requirements. Even the size and the complexity of the trains may be re-

duced to a deceptively simple level. In short, in the logistical environment found in many field training exercises, management and span of control problems are greatly reduced.

The third aspect involves the importance of brigade and battalion level FTXs to the commanders concerned. Maneuver units pour a great deal of effort into planning and preparing for such an event, because many of their critical training tasks can be done only during an FTX. It is therefore quite natural that commanders should demand that every possible step be taken to support the exercise. This emphasis is well placed, but its results must also be considered.

In actual practice, CSS is rarely ever interrupted or limited—the support of the FTX is the end purpose; the training of the tactical logistician is secondary. Good units do stress training in communications, security, camouflage, and fieldcraft of all types, but this, unfortunately, is not the type of training in question. The S-4, for example, rarely gets to move and set up field trains in new locations during darkness. His span of control is not tested, and he is not required to support and move at the same time. He may practice noise and light discipline on resupply runs but may never get a chance to attempt a throughput operation

(bypassing intermediate supply activities). While the maneuver units may practice night withdrawals, the S-4 probably stays in a static location until those units begin withdrawing from the field.

If all this is so, where does it leave us? It leaves us, the tactical logisticians, with deficiencies in our training and a need to overcome them through an increased emphasis on logistical training at the tactical level.

Accordingly, the tactical logistician must seek out the tactical operations officer early in the formulation of training plans and present his own training objectives. Then, together, they can plan and identify requirements. Teamwork is necessary to both.

The teamwork between the S-3 and the S-4 must begin *before the troops go to the field*. Command post exercises (CPXs) with FIRST BATTLE or other simulation games can be used. Reporting systems that parallel the field system can be set up in which a unit that does not request resupply or replenishment is rendered ineffective until its requests are submitted and acted upon. Maneuvers that are impractical to do on many posts

can be exercised during CPXs.

Extended offensive or retrograde operations that require the displacement of trains can be conducted as part of the movement to or from the field location. Field Manual 52-4, The Division Support Command and the Separate Brigade Support Battalion, states:

*In retrograde operations, whenever possible, brigade trains displace to the rear before the combat elements begin their rearward movement. Some elements from the brigade trains may be required to remain in the forward area to provide immediate support to combat elements.*

Brigade and battalion S-4s and their commanders should explore this general guidance, asking themselves these questions: What elements remain to provide immediate support? How much of each element remains forward? Who is in charge of setting up the new area? Who is running the existing area with the support requirements? What supplies are enroute to this location? What supplies and equipment should be, or can be, left behind? These questions multiply when a tactical trains displacement is being considered.

Careful planning and timing could even allow for a complete move of a trains area during an FTX. Such a move could be the very first or the very last event of the exercise. It could even be worked into the tactical play.

Such ideas may be only food for thought, but we are all trainers, and each of us must look at the training needs of the other. Not every FTX has to have a complete movement of the field trains, of course, but somehow each S-4 must be fully trained through practice and experience. It is only through this on-the-job problem solving that an S-4 can develop his ability to support tactical operations. He must demand opportunities to do so during peacetime and must show how the aspects of training that limit his development can be overcome. If his opportunities and challenges in peacetime are limited, his responses and solutions in wartime may also be limited—too limited.

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# Shortcomings in New TOE

LIEUTENANT TERRY L. DURAN

The old story about the lack of a horse-shoe nail causing the eventual loss of a battle is one that makers of Tables of Organization and Equipment (TOEs) would do well to heed. In the Army's rush to a Division 86-style Army of Excellence, care must be taken not to let too many horses want for nails, lest the battle overrun both the soldiers in the field and the TOE makers.

A prime example is the average J-series, M113-equipped mechanized infantry battalion in Europe. Although this battalion can expect to receive the M2

Bradley infantry fighting vehicle within the next year or two, it must, because of its location on the "front lines of freedom," be ready to go to war at any time, regardless of what it is equipped with. Unfortunately, some shortcomings in the transitional J-series MTOE (M113) are definitely nails that could cause many a shoe to be lost. Admittedly, many of these shortcomings apply to the expanded headquarters company only, but some of them apply as well to the entire battalion.

These problems can be loosely grouped

into three categories: Too Much, Too Little, and Incompatibility.

## "TOO MUCH"

First, the Division 86 mechanized infantry headquarters and headquarters company (HHC) has more than 300 men, regardless of which particular "modified" TOE (MTOE) is referred to—more than a third of the battalion's entire manpower. Because of the company's size and diversity, it is not surprising to find



many of the TOE shortcomings in it. The eight HHC sections—scout, heavy mortar, maintenance, communication, mess, personnel, medical, and battalion staff—encompass 26 different military occupational specialties in 16 different career management fields. The day-to-day training and support requirements often spread a company literally to the four winds. This often results in one of two command philosophies at company level: very loose control or very tight control.

The “very loose” concept allows the greatest freedom—within general guidelines—for the platoon and section leaders to “do their own thing,” as far as possible, in terms of training and generally running their units. This concept may result in fewer gray hairs for the company commander, and can definitely give valuable experience to the platoon and section leaders who get a chance to run things. But these leaders, to make it work, must be mission-oriented, self-starters. If they are not, there will be an erosion of meaningful training and personnel accountability.

On the other hand, “very tight” control requires an energetic, experienced company commander who can somehow keep from being buried under three times the paperwork a rifle company commander has. The “very tight” commander may raise the standards of accountability and sometimes provide more useful guidance to subordinate leaders than the “very loose” commander, but he runs the risk of imposing unrealistic requirements on one or more of the eight sections in the company because rarely is a commander an expert in all of the fields concerned.

What is required is an HHC commander who can walk the tightrope down the middle, spot checking training and providing guidance as necessary, but avoiding oversupervision, micromanagement, and unrealistic requirements or evaluations. Most, if not all, commands have a policy that an HHC commander must have successfully commanded a rifle company before he takes over an HHC. This is an excellent policy; it is also a good idea for an HHC executive officer to have had experience as a line company XO. The same goes for first sergeants.

Most HHC commanders, however, despite their best efforts, seem to wind up walking on one side or the other of the tightrope most of the time because the company is just too large and too diversified.

### “TOO LITTLE”

The “too little” problems involve both personnel and equipment. In the modern-day peacetime Army, every unit—platoon, company, battalion—will almost always be short a few men (unless it is artificially beefed up for a special occasion). But even infantry battalions in Europe, where manning levels are highest, are fortunate if half of their 36 rifle squads have eight men actually working day-to-day in each of those squads.

The reasons for this, often bewailed by leaders, are numerous: details, special duty, TDY, and the like. Most often, the problem is just too few assigned people. Many of the details that plague combat units in peacetime may vanish in wartime, but other deficiencies will not become apparent until war does break out. For example, a rifle company is authorized three two-and-a-half ton trucks—but no drivers or truck commanders (TCs). The first sergeant, supply sergeant, or XO often rides in the right hand seat of one or more of these, depending on mission requirements, but the drivers are inevitably 11Bs pulled from the rifle squads. This is not to say that they don’t do good jobs—but they are infantrymen, not truck drivers, and they can’t pull a trigger with a steering wheel in their hands.

In the field, a first sergeant or supply sergeant runs chow and other necessities to his company from the battalion trains or logistics release points, often in one of his company’s two-and-a-half ton trucks. Since no radio is authorized for that truck, however, these people are left in the dark when the company has to make a sudden, unexpected move while they are enroute.

Additionally, more thought should be given to the number and the kind of radios given to a rifle platoon leader. He has either two AN/PRC-160s (a PRC-77 in a vehicle mount) or one 160 and one

AN/VRC-46, which is impractical for dismounted use. When a platoon leader is mounted in his M113, he must maintain communication with the company commander on the company net and with his three squads on the platoon net. When he dismounts, he still has the same requirements, but he has only one radio (a PRC-77) to work with. His M113 must retain at least one radio for communication with the rest of the platoon and with the platoon sergeant, if the latter does not switch over to the command track when the platoon leader dismounts.

Unless the platoon leader always keeps one PRC-77 in a backpack mode (thereby decreasing its range and reliability and using more batteries), he is slowed down when he has to dismount rapidly. If he keeps his radio on the company net and stays near one of his squads, he can maintain communication but is hampered in his movement. If he “steals” one squad’s radio-telephone operator (RTO) (or even just its radio) to keep with him, that squad is left without communication.

A rifle platoon leader should be authorized at least one more AN/PRC-77, for a total of three on the platoon command track. The platoon leader, when dismounted, should carry one radio on his own back—either on the company or the platoon net, depending on the situation—while the RTO should carry the radio that is on the less urgent net.

In the headquarters company itself, most “too little” problems are the result of not thinking big enough—of being stuck with the idea that “this is just another company.” But it is *not* just another company. It is larger and more complex. Some of its “too little” problems are these:

- The support platoon has 18 five-ton trucks but no assigned truck commanders. To expect a driver—a private, PFC, or specialist four—to drive and navigate at the same time is not only unrealistic, it is dangerous.

- Likewise, seven fuel trucks are authorized, along with their drivers, but no TCs.

- The dining facility’s solitary two-and-a-half ton truck is expected to pull a mobile kitchen trailer (MKT) *and* a water trailer, which is clearly impossible.

- Each rifle company has one MKT



with four cooks assigned, responsible for feeding about 100 men. The HHC, with over 300 men, has one MKT with six men — one of whom is also the dining facility supervisor who must oversee more than just one MKT.

- No jeep drivers are authorized for the HHC commander, the XO, or the heavy mortar platoon sergeant.

- There is no NBC NCO for the largest company in the battalion. A 54E (NBC) staff sergeant is authorized for the HHC, but his job is in the battalion S-3 shop, where he acts as the battalion NBC NCO. The only other 54E slot is for a decontamination equipment specialist (specialist four or below). If the rifle companies rate a 54E sergeant for about 100 soldiers, then surely the HHC deserves one.

- No training NCO of any type is authorized for the HHC, despite 290 enlisted men in 26 different MOSs.

- MTOE calls for one 76Y (Supply) staff sergeant and two clerks in HHC, one of whom is the armorer (still 76Y). Experience has shown that this supply sergeant should be a sergeant first class with two clerks also authorized, along with an additional sergeant 76Y armorer.

- One problem common to all the companies in the Division 86 mechanized infantry battalion is handling the prescribed load list (PLL). Each company has its own PLL, which is the means whereby vehicle parts (and many other essential items) are ordered. The six companies — HHC, A, B, C, D, and E—are authorized only four PLL clerks, and one of them must also handle TAMMS (The Army Maintenance Management System). With one clerk handling TAMMS, one clerk each for HHC and Company E — which have the largest and most varied PLLs — and one clerk per two line companies, at least one more PLL clerk (MOS 76C) is needed.

### INCOMPATIBILITY

The HHC organization breaks down into two main groups: combat arms (scouts and mortars) and combat support (communication, medics, maintenance, cooks, and PAC), but both groups must be battle ready. There is a basic incompatibility, though, in their missions —

dropping mortar rounds or scouting out an enemy's strongpoints are tasks essentially different from turning a wrench or repairing a radio or flipping a pancake. All of these jobs are necessary, of course, but a soldier's primary mission is either to engage his enemy with direct or indirect fire or to support the guys who do.

This basic split just makes things harder for the headquarters company and its commander. One potential solution would be a return of sorts to the old combat support company concept, but under a different name.

Since in tactical operations the scout and heavy mortar platoons work for the battalion commander and the S-3 anyway, they could be removed entirely



from the HHC and put in Company E. The present MTOE Company E is smaller than a rifle company: 60 men compared to 100. Taking the scout and mortar platoons out of HHC would lighten the load on the shoulders of the HHC commander, the XO, and the First Sergeant by 65 people, and would increase the present Company E to only a little more than a rifle company (125). Maintenance operations would also be consolidated in the case of the scouts, who are also equipped with ITVs.

Another solution, although not as elegant, would be to create a maintenance company. It would consist of the maintenance platoon—by far the largest now in HHC, with over 100 men—the communications platoon, and a small direct support contact team for items such as crew-served weapons, Dragons, TOWs, and

night vision devices.

The entire battalion's problems dealing with equipment such as radios could be solved simply enough—given, of course, the money and the will to buy more equipment. The personnel problems, however, would be more difficult, since they result largely from an effort by high level planners to do more with less. This means that the makers of TOEs are not likely to look favorably upon requests for more people.

### SOLUTIONS

Stopgap, make-do solutions can always be found, of course, one way or another — life goes on and the mission must be accomplished, regardless. And infantry units worldwide are finding their own best solutions: Soldiers in 11 and 19 series MOSs sometimes find themselves doing jobs that are entirely different from those they learned in Basic and AIT. This is not necessarily bad, in and of itself, for diversity is usually an asset, so long as a soldier can still do his primary job.

Three things are necessary, though, if the Division 86 Army of Excellence is to live up to its name:

First, infantry units — and combat arms units in general — must have the number of people necessary to accomplish the mission. (I once evaluated a heavy mortar platoon on a maneuver ARTEP that could not man all its gun tracks and its FDCs at the same time, even with only two men per gun instead of the authorized four, because it was at half strength.) Soldiers and NCOs who are guiding two-and-a-half ton or five-ton trucks through the woods can't be with their squads or platoons. Drivers without TCs get lost. Doing more with less only goes so far.

Second, the chain of command, from team leader to top commander, must not only keep looking for better ways to accomplish the mission, or for ways to remove obstacles that hinder mission accomplishment, they must also be willing to push their suggestions up the chain of command. Whether it is for adding some radios so that a platoon leader can follow doctrine or for assigning enough PLL clerks to take care of all the companies



in a battalion, the worst that can happen is that the answer will be "No." And the suggester's immediate reply should be, "Why not?"

Finally, DA-level TOE planners must be more willing to listen to fine-tuning suggestions, not just where it saves money but also where it means spending a little extra to get better training or better mission accomplishment. This also demands that the people with fresh opera-

tional experience have an opportunity to directly influence the MTOE-making process, so that unrealistic requirements can be reduced and eventually eliminated.

Budget requirements and political restraints are indeed the bottom line: What we don't have the money for, we can't buy. But there are always alternatives, and fine-tuning MTOEs with an eye to increasing mission accomplish-

ment would be a major step toward a true Army of Excellence.



Lieutenant Terry L. Duran is assigned to the 1st Battalion, 36th Infantry. He has served as a rifle platoon leader and a heavy mortar platoon leader and has functioned as a headquarters company executive officer.

# Centralize the Plan, Decentralize the Execution

LIEUTENANT MICHAEL A. GALASSI

Working in operations and training for the past five years, watching units struggle to document what they had done and justify what they planned to do, I've sensed that something was wrong. It was a gut feeling that I couldn't quite articulate, but for the sake of trainers below the battalion level, maybe it's time I tried.

The Battalion Training Management System (BTMS), which consists of binders full of training management techniques and documentation, does not yield comparable dividends in combat readiness. I'll admit that the theory behind BTMS seems foolproof, but the problems we have in training today go much deeper. They come, I think, from much higher levels than the battalion.

BTMS is a good solution for the wrong problem. Our problem shouldn't be one of trying to make managers and planners out of leaders at the battalion and lower levels. Hopefully, they have all they can handle being trainers. Rather, our training plans need to come from the top; they need to be centralized. The only decentralization in training should be in its execution. (Why should we approach train-

ing differently from the way we approach war? War plans are centralized, but battles become very decentralized when platoon leaders have to execute those plans.)

Those of us in the Reserve Components have become very well acquainted with mission task lists, mission essential task lists, and post-mobilization training plans. There's nothing wrong with that, except we're acquainted with them because we at the battalion and company levels are primarily responsible for their development. There *is* something wrong with *that*, however, and it's wrong because that battalion is part of a division when it's mobilized. It is not an individual entity responsible only to itself. Our post-mobilization training problems are therefore compounded when the battalions that do report to a mobilization station may be working on different priorities and, in many cases, at different levels.

This situation will be inevitable unless there is a drastic change in the way we develop our training plans. The changes I'm suggesting have only one basic goal—to provide a consistent level of

combat readiness throughout a division. For this to be accomplished, commanders and staffs at division and higher levels should decide where they want their battalions to be in terms of combat readiness, with the decision being based on our wartime missions and our available resources. A plan should then be developed and a time frame established for bringing all like battalions within a division to the same level of readiness. To do this, the plan would have to be standardized with, as an example, all infantry battalions in that division training on the same missions and tasks during a particular training year. Then annual evaluations would be based on how well that unit could perform the missions it was assigned that year.

For the division commander to get an objective look at where his battalions are and where they need to concentrate their future efforts, the evaluation team would have to come from his headquarters. Every battalion (of the same branch) within that division would then receive the same evaluation on the same missions. It is obvious that any battalion





**The Army develops the plan; staffs plan the execution; and leaders execute the plan.**

commander who knows exactly which missions or tasks his battalion must train on would spend most of his time developing interesting and innovative training techniques instead of developing training plans. He wouldn't be concerned with which missions to program into his yearly training plan; that would already be done for him, and just as in a war, his mission would be to lead the execution of the assigned mission.

With a "train as you fight" approach, documents such as training schedules and job books become unnecessary. In their place we should consider, simply, operations orders and immediate retraining on botched-up individual tasks—in other words, do it until we get it right and then move on. Individual tasks should be trained and retrained during rehearsals for collective training and performed during the conduct of that collective task or ARTEP mission. The priority for individual training should go to those tasks that support the major ARTEP missions being trained that year. The ITEP becomes unnecessary when squad leaders train their soldiers as a unit, while at the same time conducting on-the-spot corrections and retraining. The Army's emphasis should be on evaluating units, not individuals.

As Army trainers, we don't need courses and manuals telling us how to manage training. We need an Army-wide training system that follows three basic principles: The Army develops the plan;

staffs plan the execution; and leaders execute the plan.

A common-sense approach to training management is long overdue. It's time we ended our present fascination with documentation. Any unit can publish tons of documents to support what it's doing or is supposed to be doing, but do those documents make that unit any more combat ready? Evaluations need to be directed toward how a unit executes its assigned missions. The process that a commander uses to organize and implement the execution of his training program should be irrelevant to the outside evaluator. Whether a commander has an effective training program or not will show up when he employs his unit under different tactical scenarios in the field.

Strong leadership and motivated trainers, not systems and theories, will improve unit training, ensure that higher headquarters missions are carried out, and result in an overall increase in a unit's ability to go to war. The top people in any field get there by working hard, using common sense, and following their own instincts. (Ask any head of a major corporation if his success is attributed to some magical theory or system he pulled out of a textbook in college.)

If a unit commander wants to use some of the management techniques from BTMS, that's fine, but only if it helps him better organize and use his training time. If he's using these procedures only to fulfill a requirement, though, then he's

wasting his time and his soldiers' time as well.

The battalion I work for has always done its best to establish training programs under BTMS guidelines, and continues to do so (as directed by higher headquarters), but there was never much consistency between units in the battalion, and our annual training evaluations were never better than average, until under one commander, the battalion received C-2 ratings (Excellent) for three consecutive annual training periods. Why the sudden change? In one word, "standardization." Rifle company training programs were standardized while our headquarters and combat support companies trained to support the major ARTEP missions we would perform at annual training. The units in the battalion had a common goal. They trained toward that goal during inactive duty training (IDT) and executed better than ever before during our annual training periods. The commanders were concerned only with conducting training, not with figuring out what they were going to do, or where their priorities should be.

Once training programs become standardized within the Army's divisions, and once specific missions are assigned, we can base our evaluations of a unit on whether or not the training being conducted is mission-oriented, challenging, varied, physical, well led, and innovative (and therefore more interesting to the soldiers). These are answers you'll find in the field, not in training rooms.

If we ever hope to attain a higher level of combat readiness throughout the Total Army, our first step must be to boot decentralized planning out of our training offices and replace it with a training program that emphasizes the decentralized execution of a centralized plan. I can't speak for the entire Army, but those of us in the Reserve Components don't have the time to do it any other way and still maintain the level of readiness expected of us.

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**Lieutenant Michael A. Galassi** served for six years on active duty in Korea and at Fort Campbell and since 1979 has been a member of the Illinois Army National Guard. He is presently a full-time training officer for the 2d Battalion, 130th Infantry, 47th Infantry Division.

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# Land on the Objective

CAPTAIN RONALD M. BUFFKIN

The loss rate for helicopters during the United States' intervention in Grenada in 1983 demonstrated the necessity for carefully planning airmobile operations. Given suitable conditions on the landing zone (LZ), an infantry commander has two choices—land on the objective or land away from it and maneuver to it. The factors of surprise and time favor landing on the objective.

A plan to land an airmobile force on the objective can succeed if the airmobile task force (AMTF) commander will apply the concept of "Three Slows and a Quick," a concept born and used successfully during LAMSON 719, the invasion of Laos between 8 February and 9 April 1971.

The three Slows are the principles of warfare that are "slow" by virtue of having to be planned for—combat power, enemy, and surprise—not slow in terms of speed. The Quick is the factor of time—the time available to accomplish the mission. Time is "quick" because it is the single most important principle in executing an airmobile operation. An infantry unit that lands on the objective must be quick—the success of the operation depends upon it.

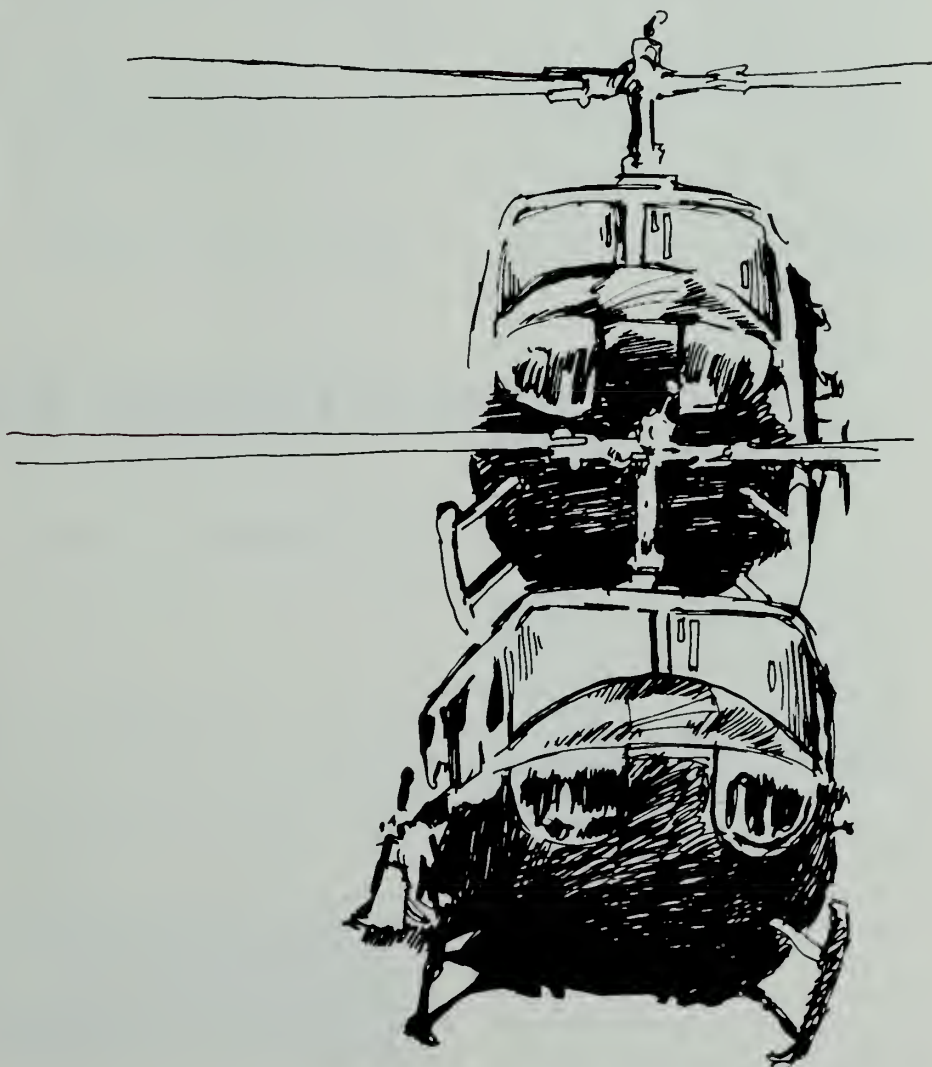
The Slows must be planned for as completely as time will allow. The Quick, on the other hand, is a function of training and discipline and can be improved only slightly through rehearsal.

Combat power, the first Slow, refers to how much combat power can be introduced early in the operation. In an airmobile operation, this power usually takes the form of artillery fire, close air support, occasional naval gunfire, and fire from attack helicopters. Field Manual 90-4, Airmobile Operations, contains adequate guidance on the in-

tegration of all these assets, but one of them, the fire from attack helicopters, is of particular use to the AMTF.

Our attack helicopter units are organized and trained to operate as members of the combined arms team. They are highly responsive, accurate, maneuver units capable of decisive action. When used to escort a task force, attack

helicopters are the most responsive form of firepower available to the commander. In fact, their responsiveness is the key to the success of a landing on the objective, but attack helicopters cannot and should not replace indirect artillery fire in support of an airmobile operation. (Since attack helicopter units are, by doctrine, aerial maneuver units, they should be



placed under the operational control of the AMTF as a subordinate maneuver unit.)

It is important that the mobility of assault helicopters not be confused with their maneuver. The Black Hawks (UA-60s) that carry the task force to the LZ are a form of mobility for the infantry. Just because a battalion task force lands untouched on an LZ that is also its objective doesn't mean that it has "maneuvered" itself there. (Maneuver, to quote FM 100-5, is "the dynamic element of combat," while mobility is a function of how a unit gets where it is going, whether by jungle boot, Bradley, or Black Hawk.)

In planning for combat power, therefore, infantry commanders and their staffs should integrate attack helicopters into the airmobile scheme of maneuver. (Since the attack helicopter unit is a subordinate maneuver unit, its instructions go in the sub-unit paragraph, not under "fire support.")

The second Slow to be planned for is the enemy—specifically, his strength, weapons, and air defense systems in and around the objective. Since the task force will be landing on the objective, all known and suspected air defense artillery positions must be neutralized or sup-

pressed before it lands. It is a tall order for an S-2 to identify these ADA sites, but a weapons template and good map reconnaissances or aerial photographs can help.

Today, aircraft such as the Black Hawk can absorb a considerable amount of fire and continue to fly, but no helicopter can fly over enemy weapon systems with impunity. The on-board weapons on an assault helicopter are used, at best, for suppression only. The doorgunners should not be expected to provide additional firepower; rather, their job is to return the fire directed at their aircraft, and they continue firing just long enough to get in and out of an LZ. Ideally, every major weapon system on the LZ or objective should be hit just before the task force lands.

A word of caution is needed in planning fires on the LZ. Smoke and fire tend to confuse inbound helicopters. If a landing on an objective is to succeed, the LZ cannot be in flames when the helicopters get there.

The third planning goal, surprise, is essential. The careful use of terrain, cover and concealment, darkness, and reduced visibility all contribute to surprise. Smoke and the sound of preparatory fire can also be used effec-

tively to mask incoming helicopters. Landing on the objective sometimes creates the best element of surprise, especially if tactical deception has been used in all phases of the planning.

Landing on the objective also favors missions that are limited in time—the one Quick factor. But during the time spent on the objective, the action should be violent, swift, and lethal. Landing on the objective allows no time for a movement to contact, an approach march, or an assembly on a strobe marker. The troops need to be taught that landing on the objective is like stepping into an ambush kill zone seconds before it is blown.

The Three Slows and a Quick cannot replace a knowledge of FM 90-4 or practical experience working with aviation units. By simplifying the task and reducing the hazard, however, this concept can give an infantry unit commander and his staff a mental tool to help them succeed when landing on the objective.

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## Dismounted Drill

CAPTAIN CLARENCE K. K. CHINN

Leadership in combat is an infantry company commander's sole reason for being. In peacetime, this translates into producing a unit that is ready to fight and win on tomorrow's battlefield. One method of training that can help a commander in this effort is drills. Drills allow small units to link individual and leader tasks into coordinated, efficient, and effective group action. Drills also provide a means by which a unit can make sure its train-

ing in these tasks is done right and properly reinforced.

Although battle drill has received some attention in recent years, dismounted drill is generally neglected, even though the proper use of dismounted drill can help prepare a unit for conducting battle drill more effectively.

Throughout recorded history, military leaders have recognized that fighting men have to be disciplined, organized, and ex-

ercised collectively in battle. From this early realization sprang the necessity for dismounted drill, which embraced both weapon training and field exercises.

Dismounted drill was designed not merely to instill discipline but also to teach the soldier the kind of close-packed formations and movements actually used on the battlefield. Drill movements and formations were tactical maneuvers involving both fire and movement, and



troops were taught in parade formations how to withstand, unflinchingly, the impact of fire and the assault of a column of infantry or horse. Dismounted drills enabled a commander to move forces quickly from one point to another and to mass forces and maneuver them on the battlefield as the situation developed.

Before the end of the eighteenth century, dismounted drill was directly connected with the battlefield. The place and duty of a soldier in battle was taught through the constant repetition of dismounted drill. A well-drilled soldier would precisely and instinctively execute the orders of his commander. In short, dismounted drill was training for war; depending on the situation, the proper execution of orders would lead to victory on the battlefield.

Today, although dismounted drill procedures are no longer used on the battlefield, some of the same objectives that have always been accomplished by that drill—discipline, precision, teamwork, confidence—are just as important today. In fact, dismounted drill is the first step in linking individual and leader tasks together to provide a coordinated group action. This action, in the form of soldiers instantly moving in unison to barked commands, teaches a soldier the basics of his trade. And a confident, disciplined soldier who understands teamwork provides a good foundation upon which to build an effective fighting unit.

One of the key objectives of dismounted drill, of course, is to develop discipline in the soldier. Discipline is the habit of instantly and automatically obeying the will of the leader. Without discipline, a unit cannot function, for discipline is the human basis of response on which effective command rests. Dismounted drill leads to good discipline by reinforcing good discipline.

When a leader gives a command, he must demand precision—alertness, attention to detail—and instant obedience. Otherwise, he is not reinforcing good dis-

cipline, and a soldier's failure to react instantly to a command given by a leader in combat may mean the difference between life and death for that soldier or others in the unit.

Another key objective of dismounted drill is to build the concept of teamwork into each individual soldier. Teamwork is putting individual skills together to create one unified effort. Dismounted drill gives the leader a tool with which to build this unified effort. With it, he takes individual skills and combines them to create a coordinated group action. On the drill field, when soldiers react precisely, instantaneously, and in unison to the commands of the leader, everyone involved feels the effect of teamwork.

## LEARNS

But when one soldier fails to follow the commands of the leader instantly and precisely, teamwork diminishes. His failure has a negative effect on the entire unit. From this, the soldier learns what he must know on the battlefield—that when one man gets “out of step,” other men may die.

The last key objective of dismounted drill is to build confidence in the soldier. Each time he reacts precisely and instantly to the commands of the leader, his self-confidence grows. When he begins to realize that his individual actions are correct, this also develops in him a sense of pride and accomplishment.

When dismounted drill is conducted as a team (fire team, squad, platoon, company) and all the soldiers react in unison, each member of the team becomes more confident. Teamwork builds, and the men gain a sense of esprit de corps. The soldiers begin to understand that by working together they can achieve positive results. Human nature, after all, desires gratification, and the leader's praise of the unified effort increases the soldiers' pride.

As a soldier's confidence in himself and his team builds, so does his confidence in his leader. During the drills, he sees the leader organize the unit, issue commands, and enforce the standard to which those commands are carried out. He therefore knows that the leader himself knows the standard, and this increases his confidence in the leadership ability of his leader. In combat, this confidence becomes especially important, for if a soldier has to stop for one second to think about whether his leader's command is the proper action to take, he may die.

The benefits to be gained from dismounted drill depends on how well the drill is carried out. Dismounted drill should be conducted every duty day for ten to fifteen minutes, perhaps after physical training or after morning parade. The standard should be to have soldiers moving precisely, instantaneously, and in unison to the orders of the leader. The leader must insist on absolute perfection every time dismounted drill is conducted. For those soldiers who understand the purpose and the correct use of dismounted drill, those ten or fifteen minutes will be well spent.

Dismounted drill is a return to the basics of soldiering. It provides a building block for the development of a well-trained soldier—a soldier who is confident and disciplined and who understands teamwork. Dismounted drill, conducted to the proper standard, ensures a good foundation upon which leaders can build a combat-ready unit.



Captain Clarence K. K. Chinn is now assigned to the 2d Infantry Division in Korea. Formerly, he served with the 9th Infantry Division and the 2d Battalion, 75th Infantry (Ranger) at Fort Lewis. He recently completed the Infantry Officer Advanced Course.



# ENLISTED CAREER NOTES



## USASMA CORRESPONDING STUDIES COURSE

A selection board will convene at Fort Benjamin Harrison, Indiana, on 28 April 1986 to consider applicants to enroll in Class 14 of the U.S. Army Sergeants Major Academy Corresponding Studies Program, which begins in April 1987.

About 200 soldiers will be selected to enroll in the program, and no alternate or standby board list will be established.

To be eligible, applicants must be in the rank of SFC/PSG (promotable), MSG/ISG, or SGM/CSM (not waivable), and must hold basic active service dates (BASDs) of 1 May 1964 or later. (General courts martial convening authority is authorized to grant waivers for personnel who want to apply with BASDs from 1 May 1960 through 30 April 1964.) Applicants who are not selected may reapply in subsequent years.

Soldiers who complete the USASMA corresponding studies program do not incur a service obligation.

Soldiers who have completed or are enrolled in the corresponding studies program are not eligible to attend the resident course. But those who apply for the CSP and are also in the zone of consideration for the resident course will be considered for the resident course first, unless they specifically decline that consideration. Applicants who are selected for the resident course will not be considered for the nonresident course. This procedure allows eligible soldiers to compete twice for USASMA before the same board.

The zones of consideration for the resident course and procedures for declining that consideration will be announced later.

Successful completion of either the resident or the corresponding studies course carries the same weight with career managers and selection boards. Both are fully accredited by the Southern

Association of Colleges and the American Council on Education.

Applications must be forwarded through appropriate MILPO and command channels to Commander, MILPERCEN, ATTN: DAPC-EPT-FN, 2461 Eisenhower Avenue, Alexandria, VA 22331-0400 to arrive not later than 5 April 1986.

Further information is available in MILPO Message Number 8651, or from MSG McInnis, AUTOVON 225-3405, commercial 202-695-3405.

## WARRANT OFFICER ENTRY COURSE

The Warrant Officer Entry Course has been developed to train highly motivated junior noncommissioned officers to support the advanced technology of the future.

The Warrant Officer Entry Course at the service schools is taken in two phases, either as a resident course or by correspondence. The six-week, four-day resident course is designed to teach the candidates leadership, ethics, motivation, counseling, military justice, personnel management, and the communication arts.

The Warrant Office Entry Course, Reserve Component (WOEC-RC), incorporates all the subject matter of the active component course. The correspondence phase (135 hours) is made up of those subject areas that are adaptable to export; it must be completed within the 12 months preceding attendance at the resident phase.

The resident phase involves two weeks of training at the Army Reserve Readiness Training Center (ARRTC), Fort McCoy, Wisconsin.

Following completion of WOEC or WOEC-RC, the candidates are ready to attend technical certification training at their respective MOS proponent schools

to complete Phase II of the program. In Phase II, the emphasis is shifted from officer training to technical training.

## CHANGES TO EER

The Army enlisted evaluation report (EER) is being revised on the basis of recommendations from the NCO Professional Study Group. The group recommended establishing eight essential categories of competency to aid in the selection and development of NCOs.

The eight categories are as follows:

- An NCO must be thoroughly proficient and knowledgeable regarding the full range of duties of his present assignment.

- An NCO must maintain a level of understanding of his particular military occupational specialty (MOS), even when certain responsibilities do not fall under his present assignment.

- An NCO must have the basic educational skills required to communicate effectively, to train, to counsel, and to write reports pertinent to his position.

- An NCO must be physically fit and must maintain proper military bearing at all times to be ready to fight and lead and to be a strong positive example to the soldiers under him.

- An NCO, as a leader, must be attentive to the needs and concerns of his soldiers, continually looking after their interests and making sure his troops can fight and survive in battle.

- An NCO must be, primarily, a trainer.

- An NCO must hold the professional values and standards of his service, which lead to greater discipline and dedication to duty.

- An NCO is responsible for managing and accounting for the soldiers, property, and equipment placed in his charge.



# OFFICERS CAREER NOTES



## NATIONAL INFANTRY BALL

The 1985 National Infantry Ball was held at the Hilton Hotel in Springfield, Virginia, on 9 November 1985. Major General John W. Foss, then Commandant of the Infantry School and Chief of Infantry, acted as the Master of Ceremonies for the event, at which General Matthew B. Ridgway was honored as the 1985 recipient of the Doughboy Award.

Plans are now being made for the 1986 National Infantry Ball, to be held 15 November 1986 at the same location, and nominations are being solicited for suitable candidates for the 1986 Doughboy Award.

Candidates should be members of the private or retired sectors who have significantly contributed to the Infantry or to the overall improvement of the quality of life for soldiers.

Nominations should be submitted to DA, MILPERCEN, ATTN: DAPC-OPE-I (Infantry Ball Committee), 200 Stovall Street, Alexandria, VA 22332-0400.

Anyone who would like to attend the 1986 ball may write to this same address asking that his name be added to the invitation mailing list.

## OER SUPPORT FORM

All Army officers must now use the revised Officer Evaluation Report Support Form. All rated officers must maintain a working copy of the support form throughout the rating period. This working copy should show the date of the initial face-to-face discussion between the rater and the rated officer and must be verified by their initials.

The Military Personnel Office is no longer responsible for initiating the form and providing it to the rated officer.

Complete guidance on the preparation

and use of the new OER Support Form is in AR 623-405 (Officer Ranks Personnel Update).

## PROBLEMS WITH OFFICER PREFERENCE STATEMENTS

Although much has been published on the need for officer preference statements, some officers apparently still believe that submitting them is useless because they are not used anyway.

This is just not true.

Having a statement on file does not guarantee an officer his desired assignment, of course. But it does give him an opportunity to participate in the assignment process, and it is used. Every time an assignment manager reviews an officer's record, he sees that officer's preference statement information — if it is available — displayed on his computer terminal.

Too many officers, however, still have not updated their master files using the new DA Form 483, even though it was implemented in early 1985. And among those who have, too many have failed to complete their forms properly.

The Officer Preference Statement is now a mark-sense form, and an assignment officer's computer terminal provides the only readable translation of the information coded on it. If a form has not been completed accurately, it can cause delays in processing. As a result, an officer's latest preferences may not show up on his record at a crucial time.

DA Form 483 is simple to complete, but it is sensitive. The instructions in its upper right-hand corner must be followed carefully, with special attention to certain items:

- A #2 pencil must be used to fill out the form — not a pen, crayon, or felt-tipped marker.

- The entire mark-sense circle must be completely darkened.

- The officer's Social Security number must be entered in the area indicated.

- The form must be mailed *unfolded* in a 9x12 envelope. The reader cannot process folded forms.

An officer can submit a preference statement at any time, but MILPERCEN recommends that he do so at the following times especially:

- About 12 months before completing a long tour overseas.

- Upon arrival at a short-tour area.

- About 12 months after reporting to a CONUS assignment.

- At least 60 days before beginning a military service school, or training with industry that requires a permanent change of station within CONUS.

## ARMY WAR COLLEGE CORRESPONDING STUDIES

Some curriculum changes in the U.S. Army War College Corresponding Studies Program, to be effective with the class of 1987, will affect core subjects and course structure. The changes will ensure that the corresponding studies curriculum closely parallels that of the resident course.

Additional emphasis will be placed on military doctrine, warfighting at the operational level, and the changing international environment that will affect U.S. national strategy formulation in the future.

Graduates of both courses will continue to be awarded Military Education Level 1 and will be given equal consideration for assignments that require officers who have been awarded senior service college diplomas.

The Chief, Army Reserve Professional Development Education Board considers Reserve officers for both the Army War College Resident Course and the Corresponding Studies Program.

# BOOK REVIEWS



Once again we have a number of important books we would like to call to your attention. First is Brigadier Richard Simpkin's **RACE TO THE SWIFT: THOUGHTS ON TWENTY-FIRST CENTURY WARFARE** (Pergamon-Brassey's, 1985. 345 Pages. \$32.50). The author retired from the British Army in 1971 after 30 years of active service as an officer of the Royal Tank Regiment. Since his retirement, he has written a half-dozen important books on armor warfare.

In this, his latest book, Simpkin offers dozens of meaty ideas that all serving U.S. infantrymen should ponder carefully and digest slowly.

For example, he offers a proposed organization for NATO's armies that differs considerably from the present ones; the tactics the new formations should employ; and the development of the leaders to command those units during wartime. He also discusses the writings of Carl von Clausewitz and why he feels Clausewitz's writings have been misinterpreted; the importance of terrain to the ground soldier; maneuver warfare; and the importance of mass in determining success in battle.

All of this — and there is more — makes the book essential reading.

Another important book is the third and final volume of D. Clayton James's biography of Douglas MacArthur — **THE YEARS OF MACARTHUR: TRIUMPH AND DISASTER, 1945-1964** (Houghton Mifflin, 1985. 848 Pages. \$29.95). In this book, James, a professor of history at Mississippi State University, traces General MacArthur's life and times from his arrival in Japan on 8 September 1945 to his death in the Walter Reed Army Medical Center on 5 April 1964.

This is biographical history at its best — objective, well written, thoroughly researched. James has divided his book into three major parts: the occupation years from 1945 to 1950; the war in Korea

from its beginning in June 1950 to MacArthur's relief on 10 April 1951; and MacArthur's final 13 years of life, most of them spent as chairman of the board of the Sperry Rand Corporation.

When he feels it is necessary, James criticizes, but he also praises his subject for actions well taken. He makes few personal judgments and admits that after more than 18 years of work on MacArthur, he still knows precious little "about MacArthur's inner self."

This is one of those books — as James's first two volumes in this same series are — that Infantrymen should find professionally rewarding.

As part of the MacArthur story, portions of a recent biography of Admiral William F. "Bull" Halsey by E. B. Potter, a professor emeritus of history at the U.S. Naval Academy, are of considerable interest because of Halsey's relationship with MacArthur in the Pacific Ocean areas during World War II. This book is titled **BULL HALSEY** (Naval Institute Press, 1985. 421 Pages. \$19.95). Unfortunately, Potter can find no warts on his man and a reader has to wonder why not. Still, his is a good account of the Navy's coming of age in the first half of the 20th Century and of the life and times of one of that service's most colorful and sometimes controversial combat leaders.

Another colorful combat leader — the U.S. Army's Matthew B. Ridgway — is profiled in another recently published book, one that may (or may not) be welcomed by all airborne enthusiasts. It is Clay Blair's **RIDGWAY'S PARATROOPERS: THE AMERICAN AIRBORNE IN WORLD WAR II** (Doubleday, 1985. 588 Pages. \$19.95).

It is really two books in one, as the title indicates, and while the author says it is not an "authorized biography," he did have access to General Ridgway's private and official papers and did have Ridgway's full cooperation during the research phase of this project. (This book

may also be considered an "inside story" of the U.S. airborne effort during World War II, what with the accounts of personal rivalries and petty jealousies in the various airborne units at regimental level and higher.)

Although the airborne soldiers, in general, fought well once they were on the ground, they usually had to start fighting from almost impossible situations because the air transport phases of the various operations failed. Accordingly, no major Allied airborne operation during World War II in North Africa, in the Mediterranean theater, or in north-west Europe was an unqualified success. In fact, serious thought was given at the highest levels at various times during the war years to disbanding the airborne divisions.

Ridgway himself proved to be an exceptional combat commander, at both division and corps levels. He was not liked by all of his subordinate commanders, and his actions at St. Vith during the Battle of the Bulge have been openly criticized by other commanders who were on the scene.

Ambitious almost to a fault, driving, personally brave, fiercely competitive, Ridgway ended the war as one of the Army's brightest stars and a force to be reckoned with in the post-war years.

Blair writes well and if his claims for the airborne effort seem slightly exaggerated, his story of that effort should be welcome reading by all airborne enthusiasts. At the same time, his narrative of the operational events should alert those same enthusiasts to the tremendous problems airborne commanders can expect to encounter in mounting and executing any future major airborne operation.

Here are several other interesting publications that have recently come our way:

- **THE MILITARY BALANCE, 1985-1986**, by the International Institute for Strategic Studies in London (IISS,



1985. 199 Pages. \$21.00). This authoritative annual publication appears in its usual format and lists organization, manpower, budgetary information, and equipment of the armed forces of 148 countries. It also contains a section in which the Institute provides brief summaries of the existing international security arrangements and treaties, compares defense expenditure patterns, and identifies major new arms sales agreements. A final section discusses "the East-West conventional balance in Europe." (The material is current as of 1 July 1985.)

It is important to note, too, that this publication provides more extensive and detailed information than ever before on the organization and equipment of the Soviet armed forces. In fact, the Soviet entry has been changed to reflect the division of Soviet forces into five arms — Strategic Rocket Forces, Ground Troops, Air Defense, Air Force, and Navy — and the order of precedence that the Soviet authorities attach to them.

Overall, the Institute feels that "military budgets — with the important exception of the super-powers — are generally showing slow or no growth and in a number of cases budgets are actually declining. Modernization naturally continues as weapons become technically obsolete, but overall numbers of deployed weapon systems or of men in uniform have shown little change over 1984."

• **THE POLISH CAMPAIGN 1939**, by Steven Zaloga and Vincent Madej (Hippocrene Books, 1985. 195 Pages. \$19.95). The authors draw on little-known but extensive Polish documentary sources to tell the story — from a Polish viewpoint — of the first major World War II campaign. They include a complete Polish order of battle as it was in September 1939 and a discussion of Poland's strategic planning and tactical doctrine. Although Poland's small forces fought heroically, the authors concede that "the outcome of the campaign was a foregone conclusion before it even began."

• **THE FIGHT FOR THE CHANNEL PORTS: CALAIS TO BREST 1940, A STUDY IN CONFUSION**, by Michael Glover (David and Charles, 1985. 269

Pages. \$25.00). By the end of the first week of June 1940, more than 300,000 British and French troops had been taken off the European continent through and around the Belgian port of Dunkirk. To most of the world, this was the end of the British Army's participation in the defense of western Europe.

Not so, says the author, an often-published British historian. In his latest book, Glover tells the story of the 160,000 British soldiers, including those in Britain's only armored division, who were trapped outside the Dunkirk perimeter and who fought their way down the Channel coast seeking a way to safety. (Thousands of other British troops were still in the south and west of France as well.) Eventually, 144,000 of these British soldiers were evacuated to England.

Parts of this story have been told before; here Glover has told the whole story, ending with "the final undignified scurry from Brest." In addition to being good military history, this book provides the professional infantryman a number of important lessons in the conduct of rear area operations, a subject much under discussion these days.

• **NATURE BOUND POCKET FIELD GUIDE**, by Ron Dawson (OMNIgraphics Ltd., 1985. \$12.00, Soft-bound). This is one of the better books we have seen on wilderness survival in North America. Its various sections include discussions on survival in general, such as the use of a compass and map, fire starting, weather awareness, and the like; edible and poisonous plants found in North America (complete with color photographs of each species); and wilderness first aid.

Here are a number of our longer reviews:

• **ON TERRORISM AND COMBATING TERRORISM**. Edited by Ariel Merari (University Publications of America, 1985. 188 Pages. \$24.00). Reviewed by Colonel James B. Motley, United States Army Retired.

This book's 17 chapters contain the lecture and discussions that took place in Tel Aviv during the 1979 International Seminar on Political Terrorism. The editor is a member of the Jaffee Center for Strategic Studies at Tel Aviv Univer-

sity; he tells us that while this book "has been delayed for several reasons . . . it is astonishing to realize that the material in this book remains so highly relevant several years after it was written."

For many responsible and informed citizens, the continued relevance of the problems addressed six years ago regarding terrorism is, indeed, a matter of worrisome concern. Despite some impressive U.S. declarations and political rhetoric, the reality is that the free world has yet to find a way to cope with terrorism. As Merari so vividly points out — democracies are just beginning to learn what it takes to combat terrorism, or to live with it.

The broad range of issues presented in this book indicate the many dimensions of the terrorist challenge, from military options to the psychology of terrorism, from the "Stockholm syndrome" to international relations, from the Red Brigades to the Irish Republican Army. The strength of the book, therefore, is in the fact that it raises basic questions confronting democratic societies, and the seminar participants articulate in a straightforward fashion some of the difficult problems in dealing with terrorism and possible solutions to those problems.

Although the book offers little for the specialist, it should prove informative to the general reader. Chapter endnotes and a bibliography, however, would have considerably strengthened it.

---

• **KASSERINE: FIRST BLOOD**, by Charles Whiting (Stein and Day, 1985. 262 Pages. \$17.95). Reviewed by Major General Albert H. Smith, Jr., United States Army Retired.

This is a good capsule account of the North African campaign during World War II from the launching of Operation TORCH in November 1942 through the battle of Kasserine Pass in February 1943.

Those who participated in that campaign are here reminded by the author of the cold, mud, and other hardships they endured that winter in the difficult and rocky desert terrain of Tunisia. Today's commanders, on the other hand, are exposed to the lessons learned the hard way by both Allied and Axis forces. A failure



to achieve unity of command by both sides resulted in an excessive number of battlefield casualties and precluded a full victory.

Whiting's book is obviously based on many well known texts, especially the writings of Martin Blumenson. Thus, World War II history buffs should consider this book only the tip of an iceberg, a beginning of research into the dozens of volumes listed under the author's notes and sources.

On balance, this book is recommended reading for today's infantrymen. From it, they can analyze the mistakes made by their predecessors. Campaign veterans, of course, are guaranteed a range of emotional responses as they read what really happened in Tunisia some 40 years ago.

---

**THE IRANIAN RESCUE MISSION: WHY IT FAILED**, by Paul B. Ryan (Naval Institute Press, 1985. 136 Pages. \$13.95). Reviewed by Captain F. R. Hayse, United States Army.

On 4 November 1979, the United States embassy in Teheran, Iran, was taken over by a mob of Iranian men and women, and 53 Americans became hostages in a rabid anti-American political maneuver that ended after 444 days of captivity and after a failed American rescue mission in which eight U.S. servicemen lost their lives.

Until now, little factual information has surfaced concerning the ill-fated rescue attempt and its ignominious failure at an interim staging area named DESERT ONE, which was located in a remote desert area of Iran.

Several newsmagazine accounts and a book by Colonel Charles Beckwith, the mission's ground commander, provide some of the better unclassified sources of information available to the general public. Another is the unclassified and sanitized version of the Department of Defense's 1980 "Rescue Mission Report," the so-called Holloway Report.

In this book, Paul Ryan, a retired U.S. naval captain and a research fellow at the Hoover Institute on War, Revolution, and Peace at Stanford University, discusses the background, planning, and execution of the rescue attempt; world opinion and criticism; the Holloway Report; and an

expanded U.S. special operations effort. By a judicious use of numerous general reference works, articles, television transcripts, and government documents, Ryan has produced a logically organized and readable book that gives a reader an insight into the high-risk nature of all special operations.

This book is a must for those concerned with our current special operation forces and their capabilities. It will also appeal to those who like exciting adventure stories. But the ending is less than satisfying, because the actual ending to the Iranian special operation was not satisfactory.

In two of his final chapters, Ryan leaves his reader with many valid ideas that should be pondered, as well as with a series of questions concerning the future use of U.S. special operation forces. For as one former commander of the U.S. Air Force special warfare school liked to say: "How many special operations can you afford to lose?"

---

**AMERICA IN VIETNAM: A DOCUMENTARY HISTORY**, edited by William Appleman Williams, *et al.* (Doubleday, 1985. 345 Pages. \$9.95, Softbound). Reviewed by Doctor Joe P. Dunn, Converse College.

The resurgence of interest in the Vietnam War has inspired a demand for document collections to be used in the proliferation of new college courses on the war. With the *Pentagon Papers* out of print, and other collections such as that by Gareth Porter not well accepted, the market was ripe for a mass circulation paperback edition such as this. Four of the biggest names in diplomatic history add authority to this volume.

The 84 documents, which include Presidential and State Department papers, congressional debates, military reports, newspaper accounts, and treaties ranging over the period from the 1840s to 1975, are divided into four chronological sections. Each section is headed by a lengthy introductory essay to place the contents into historical context. Short commentaries illuminate the individual documents. This book is designed to serve as a college text, and I predict it will be a commercial success.

The theme and orientation of the book is clear, as anyone with any knowledge of the four editors, all doyens of the so-called new left, would expect. (In addition to William Appleman Williams, they are Thomas McCormick, Lloyd Gardner, and Walter LeFeber.) But the volume addresses such important questions as the misperceptions and deceptions of political leaders, the role of the media and public opinion on the war, and the internal consequences of the conflict. To my mind, the best section is on the 1945-1952 period when the specter of monolithic communism limited our policy options.

Despite my personal difference with the editors' perspectives, the volume is definitely worth reading. But anything that proposes to capture the immense dimension, complexity, and controversy of the Vietnam War must by definition distort grievously; that is the most important problem with this volume.

---

**STONES RIVER: BLOODY WINTER IN TENNESSEE**, by James Lee McDonough (University of Tennessee Press, 1980. 271 Pages. \$14.50). Reviewed by Major Don Rightmyer, United States Air Force.

A good volume of sound, useful military history is frequently hard to find. Such a work, by my own personal standards, should be interesting and not just "drums and bugles" coverage, and it should contain enough human interest to relay the pathos and burdens of war. It should certainly reveal the human strengths and weaknesses of commanders and leaders as well as of their men under fire and stress. This book combines all of the necessary elements for good military history; it is also about a particular battle that has begged for modern coverage (the last book written strictly about the battle was published in 1914).

After setting the stage, McDonough spends two chapters tracing the events of the months leading up to December 1862 and the stark human costs that the war had already extracted. The following chapters detail the strategy, tactics, and actual moves made by the opposing generals — Braxton Bragg and William Rosecrans — and their armies. The author is a master at describing both the



human and the tactical aspects of the battle without dragging the reader into unneeded details.

One irritating weakness of this volume, though minor, is the placement of the battle maps. They spread across two pages but the heaviest action always seems to fall in the folded portion.

But if you are hungry for a good military history of the Civil War period, this book will meet your needs.

---

**BLOODS: AN ORAL HISTORY OF THE VIETNAM WAR BY BLACK AMERICANS**, by Wallace Terry (Random House, 1984. 300 Pages. \$17.95). Reviewed by David A. Robinson.

"I went to Vietnam as a basic naive young man of eighteen. Before I reached my nineteenth birthday, I was an animal." So says Specialist-4 Arthur E. Woodley, Jr., a combat paratrooper and one of the 20 Black veterans of the Vietnam War interviewed for this book by Wallace Terry.

Each of the 20 has a different but intriguing story to tell, but each story has one basic theme — being Black and fighting with the ever-present danger of death in an unpopular war for an apathetic U.S. society. What made it worse for most Black soldiers was the

fact that they were in Vietnam doing their patriotic duty for a society that was still wrestling with itself for their equality.

But the book also has some diversity, and the author should be commended for bringing into clear focus the diverse views of those he interviewed. And because each narrative is a story in itself, a reader may skip around and finish the book without having to read it from cover to cover.

Here are personal glimpses of Black Americans fighting a war with White Americans. The book is highly recommended to all military people, as well as to those interested in the Vietnam War. The "lessons" that can be drawn from these pages could some day prove invaluable.

---

**HOW DEMOCRACIES PERISH**, by Jean Francois Revel, translated by William Byron (Doubleday, 1984. 376 Pages. \$17.95). Reviewed by Lieutenant Colonel John C. Spence III, United States Army Reserve.

In this book, the former editor of France's *L'Express* magazine has written convincingly of the problems (many of which are self-imposed) that modern democracies face in dealing with Soviet expansionism.

At the outset, a reader must bear in

mind that Revel is writing from a European perspective. As he points out, many leaders in western Europe have imposed a double standard in judging United States and Soviet behavior in the international arena. Revel notes that "to a totalitarian regime, strategic necessity is justification enough for Soviet presence in another country . . . a democracy, on the other hand, is not granted the right to defend the vital barricades of its own security unless the democratic imperative is obeyed."

Revel's thinking and insights, and the numerous historical examples he cites, can be of substantial value to the military strategist and the student of international affairs. For example, whether Spain was under Franco's authoritarian rule until 1975, or whether Spain is under a parliamentary government in 1985 is only one factor to be considered. The overall strategic importance of Spain, its newly acquired membership in NATO, and its recent entry into the European Economic Community, plus its internal form of government, is what really counts.

This otherwise well-written and well-translated book is marred by only a few errors. For instance, military historians will dispute Revel's assertion that General Eisenhower, in his role as supreme Allied commander in Europe during World War II, "made it possible



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for the Soviet Union to take over Central Europe in 1944-45."

On balance, Revel's book merits serious consideration by anyone concerned about the role that the U.S. and its NATO allies will play in the years to come.

### RECENT AND RECOMMENDED

**THE ALL VOLUNTEER FORCE AFTER A DECADE: RETROSPECT AND PROSPECT.** Edited by William Bowman, Roger Little, and G. Thomas Sicilia. Pergamon, 1985. 480 Pages. \$14.00, Softbound.

**HEDGEROW HELL.** By John Allsup. France: Editions Heimdal, 1985. 160 Pages.

**CUBA: FROM COLUMBUS TO CASTRO.** Second Edition, Revised. By Jaime Suchlicki. Pergamon-Brassey, 1986. 231 Pages. \$12.95, Softbound.

**ATLAS OF GLOBAL STRATEGY.** By Lawrence Freedman. Facts on File, 1985. 192 Pages. \$22.95.

**CHINA AND THE SOVIET UNION, 1949-84.** Compiled by Peter Jones and Sian Keivill. Facts on File, 1985. 203 Pages.

**DOUGHBOY DOGGEREL: VERSE OF THE AMERICAN EXPEDITIONARY FORCE, 1918-1919.** Edited by Alfred E. Cornebise. Ohio University Press, 1985. \$19.50.

**MISSILE SYSTEMS.** By Philip Birtles and Paul Beaver. Hippocrene Books, 1986. 128 Pages. \$14.95.

**ANTI-ARMOUR WARFARE.** By Charles Messenger. Hippocrene Books, 1986. 108 Pages. \$14.95.

**U.S. MARINES IN WORLD WAR II.** By Robert C. Stern. Uniforms Illustrated No. 11. Sterling, 1986. 68 Pages. \$5.95.

**CHAPLAINS WITH MARINES IN VIETNAM, 1962-1971.** By Commander Herbert L. Bergsma. Washington: History and Museums Division, U.S. Marine Corps, 1985. 240 Pages.

**THE NUCLEAR DUEL.** Edited by Nigel Flynn. War Today, East versus West Series. ARCO, 1986. 66 Pages. \$6.95, Softbound.

**THE MACHINERY OF DESTRUCTION.** Edited by Nigel Flynn. War Today, East versus West Series. ARCO, 1986. 66 Pages. \$6.95, Softbound.

**THE STRATEGY OF COMBAT.** Edited by Nigel Flynn. War Today, East versus West Series. ARCO, 1986. 66 Pages. \$6.95, Softbound.

**BATTLEFIELD EUROPE.** Edited by Nigel Flynn. War Today, East versus West Series. ARCO, 1986. 66 Pages. \$6.95, Softbound.

**V... MAIL: LETTERS OF A WORLD WAR II COMBAT MEDIC.** By Keith Winston. Edited with a Preface by Sarah Winston. Algonquin Books of Chapel Hill, 1985. 310 Pages. \$14.95.

**THE AMERICAN OCCUPATION OF JAPAN: THE ORIGINS OF THE COLD WAR IN ASIA.** By Michael Schaller. Oxford University Press, 1985. 351 Pages. \$22.50.

**OVER THE RHINE.** By Brian Jewell. Hippocrene Books, 1985. 64 Pages. \$6.95, Softbound.

**LIFE IN THE RANK AND FILE.** Edited by David R. Segal and H. Wallace Sinaiko. Pergamon, 1985. 300 Pages. \$14.95.

**THE YOM KIPPUR WAR.** By Peter

Allen. Scribner's, 1982. \$17.95.

**THE FREEDOM ROAD: 1944-1945.** By Richard Collier. Atheneum, 1984. 342 Pages. \$17.95.

**AFGHANISTAN: THE SOVIET INVASION IN PERSPECTIVE.** By Anthony Arnold. Hoover Institution Press, 1981. 144 Pages. \$9.95.

**SOVIET-AMERICAN RELATIONS IN ASIA, 1945-1954.** By Russell D. Buhite. University of Oklahoma Press, 1981. 254 Pages. \$14.95.

**MIRACLE AT MIDWAY.** By Gordon Prane, with Donald M. Goldstein and Katherin V. Dillon. McGraw-Hill, 1982. \$19.95.

**AND WE SHALL SHOCK THEM: THE BRITISH ARMY IN THE SECOND WORLD WAR.** By David Fraser. David and Charles, 1984. \$27.00.

**VIOLENCE IN SOCIETY: THE FORMATIVE YEARS.** By Lieutenant General E. A. Vas. New Delhi: Natraj Publishers, 1984. 389 Pages.

**TYPHUS AND DOUGHBOYS.** By Alfred E. Cornebise. University of Delaware Press, 1982. 151 Pages. \$24.50.

**WHITE EAGLE, RED STAR: THE POLISH-SOVIET WAR, 1919-1920.** By Norman Davies. First Published in Great Britain in 1972. Hippocrene Books, 1985. 308 Pages. \$9.95, Softbound.

**THE ROYAL MARINES, 1956-1984.** Text by William Fowler. Color Plates by Paul Hannon. Osprey, 1984. Men-at-Arms Series 156. 40 Pages. \$7.95.

**THEY CALLED IT PASSCHENDAELE.** By Lyn Macdonald. Merrimack, 1984. 253 Pages. \$19.95.

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# **From The Editor**

## **INFANTRY CONFERENCE**

**As we mentioned in our last issue, the 1986 Infantry Conference will be held at Fort Benning during the period 8-10 April 1986. The general theme of the conference is organizing, equipping, and training the Infantry force.**

**Infantry Association members who plan to attend the conference and who have not yet done so are asked to contact the editor of INFANTRY as soon as possible. They will be sent needed information as well as other general material of interest.**

## **SUBSCRIPTIONS**

**We would like to express our deepest thanks to those of you who have renewed your subscriptions this year. It is only through your continuing support that we are able to bring you a truly professional military journal dedicated to the United States Infantryman.**

**Our rate of subscription renewals has been one of the best we have ever enjoyed, and we look forward to a very successful circulation year. We can have this, of course, only if you and your fellow infantrymen join forces to support this, your journal.**

### **BACK COVER:**

**"Dropping in on Charlie," by Specialist-4 Michael R. Crook (Vietnam, 25 February 1967).**





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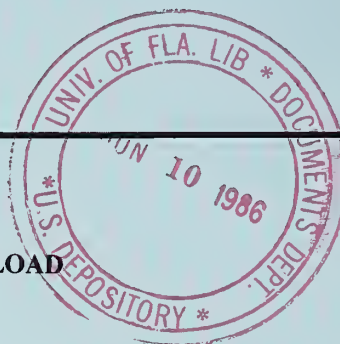
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# Commandant's NOTE



**Major General Edwin H. Burba, Jr.**  
Chief of Infantry



## THE SOLDIER'S LOAD

"The Infantryman of nearly every army today groans under the pack that is required to be carried in campaign. To reduce that burden is a matter that should be a prime consideration of the designers and approving authorities of many arms and equipment and certainly should be foremost in the minds of those who prescribe the articles to be carried on the person of the soldier."

Do those words sound familiar? They probably do, but if they appear to have been written or spoken just recently, they were not. In fact, they were written by the editors of the old *Infantry Journal* for publication in their July 1926 issue.

Of course, these men were not breaking new ground or advancing a new idea. They were simply looking at an age-old problem and asking that someone in authority find a logical, workable solution to it for the U.S. soldier in the 1920s. No one did.

The same problem in its most basic form is still with us 60 years later, and we at the Infantry School have recognized the need to find a solution to it. In fact, for several years now our Rangers, light infantry task force people, combat developments folks, and doctrine experts from our combined arms and tactics department have spent a considerable amount of time studying the problem and—particularly in the case of the Ranger Department—testing new concepts.

I do not have the space in which to tell you in detail about all of the facets of our work, but from it we have drawn a number of significant conclusions:

- The ability of an infantry soldier to fight is directly related to the load he is required to carry. In other words, if we expect our soldiers to accomplish a combat mission successfully without incurring great risk, there is an individual load limit

that cannot be exceeded.

- An Infantryman cannot carry in combat the same load he can in training and still perform with the same efficiency.

- The *optimal* total load for a soldier has been determined to be 30 percent of his body weight. This translates to a 48-pound load for an average-sized soldier. His *maximum* load should not exceed 45 percent of his body weight, or 72 pounds.

- Load planning for the individual soldier takes on a special significance when a unit is required to move on foot during a specialized combat operation—raid, ambush, behind-the-lines mission—that is expected to last no more than 72 hours. In such an operation, a soldier must be completely self-reliant and must carry his necessary fighting gear on his body. (Even under the most severe weather conditions last winter at Dugway Proving Ground, Utah, for instance, the maximum weight of our Ranger students' rucksacks, including five MREs, never exceeded 27 pounds. Of course, this was in addition to their weapons, ammunition, and LCE. The light weight of the rucksacks came about mainly because the students had the new Goretex parkas and trousers, which will become CTA items for our light divisions sometime this year. For short-duration missions, those two items can replace sleeping bags, ponchos, poncho liners, rainsuits, cold weather parkas and trousers with liners, sleeping shirts, sweaters, and insulated underwear.)

- Sustained training with realistic loads is a proven contributor to combat readiness. The idea that training with heavier loads somehow will increase a soldier's combat readiness is no sounder than the idea that bleeding during training will increase his ability to withstand battlefield wounds. Our studies demonstrate conclusively that Infantrymen who are required



to carry heavy loads in combat will tire quickly after a short movement, thereby jeopardizing the combat mission.

- The loads our Infantrymen are usually required to carry today exceed the tolerable limit and drastically reduce their combat efficiency.

Why are our soldiers still being loaded like pack animals? Unfortunately, few of our Infantry commanders tackle this problem with much more than superficial results. The habit of carrying everything they needed for any eventuality, which many of them learned in Vietnam, has been a hard one to break.

There seem to be two persistent notions that lead commanders to overload their soldiers:

- “Be-prepared.” Some commanders feel their soldiers must be prepared to meet every imaginable contingency.

- “The supply system will fail.” Other commanders conclude in advance of an operation that the supply system will fail and therefore decide that their soldiers should carry twice as much of everything.

Infantry unit commanders must insist that their soldiers’ loads—and their own loads—be stripped to the bare minimum. (The example must come from the top, and there must be no “TOC palaces.”)

Commanders must demand that their men travel as light as possible and must examine every item to see if it is needed. They must also be willing to decentralize decisions on what goes into a load, with subordinate commanders being allowed to tailor their soldiers’ loads based on their own METT-T analyses. They can be assured that if they do not reduce their

soldiers’ loads, the individual soldier in combat will reduce his own.

Thinking light must be a philosophy for all types of Infantry units. Training light is the key. The mobility value gained by lightly loaded Infantrymen has been proved repeatedly. Commanders may be surprised to find how light their soldiers can travel, how few rations they will eat in combat, and how well a basic load of ammunition will do in the toughest fight. Of course, commanders must also train their soldiers to prevent cold weather injuries, malnutrition, disease, and equipment malfunctions. They must regain expertise in caches, trail parties, ORPs, fieldcraft, foraging techniques, and field expedients.

A commander cannot be prepared for everything, so he must take calculated risks. The bold commander who carefully analyzes the odds and demands the logistical support that makes load-tailoring and risk-taking an alternative to loading down his soldiers is the one who will win in battle.

Soldiers take great pride in operating under austere conditions. They live on challenge. As S.L.A. Marshall put it, “There were no lollipops in the early Central Pacific operations. Men fought on K rations, C rations, and lukewarm water. Yet morale was as high as I have ever seen it in the Army. That is the human nature of it. Troops will never miss what they don’t expect, and, basically, they don’t expect much. They will keep on to the limit if they get an even break with other men on the line. They will become stronger in the measure that their strength is tested.”

Dare your soldiers—and yourself—to travel light.



# INFANTRY LETTERS



## MORAL DIMENSION

I would like to offer a slight correction and add to Colonel Richard F. Timmons' fine article "The Moral Dimension: The Thoughts of Ardant du Picq" (November-December 1985, p. 10).

The Prussian Carl von Clausewitz began working in earnest on his famous work *On War* about the time du Picq was born. And he, too, was very concerned with the moral dimension of war.

He devotes Chapter Three, Book One, of *On War* to a discussion of "military genius" and tells us that "the personalities of statesmen and soldiers are such important factors that in war above all it is vital not to underrate them."

His third chapter in Book Three focuses on "moral factors" in which he maintains that "moral elements are among the most important in war," and that "all military action is intertwined with psychological forces and effects."

Unfortunately, Clausewitz died prematurely in 1831, stilling his pen and leaving what in his own words was "a shapeless mass of ideas." Had he lived, he very well might have pursued the investigation of this critical dimension of warfare along lines similar to du Picq's.

FREDERICK ZILIAN, JR.  
LTC  
Navy War College  
Newport, Rhode Island

## PRINCIPLES

It was at first with great interest and then with dismay that I read "On Being a Lieutenant," by Captain Richard D. Hooker, Jr., in *INFANTRY* (November-December 1985, p. 20).

Throughout the article, Captain Hooker offers various principles on how to deal with certain individuals or classes of individuals within a company. No-

where did I note the principles of honesty, loyalty, dedication, or self-sacrifice. Most of my fellow soldiers, Active and Reserve Component, value these character traits in our leaders much more than a sense of humor. This is not to belittle the need for a sense of humor in our leaders but rather to place it in perspective.

In general, Captain Hooker appears to place a higher value on a style of leadership that will insure his career than on the timeless style of military leadership that is summarized as "men first, mission always."

DOUGLAS N. BERNHARD  
CPL

Washington Army National Guard  
Kirkland, Washington

## PUT MYTH TO REST

Reference the January-February 1986 issue of *INFANTRY* Magazine, in the Officers Career Notes section I note that "assignment officers may be able to help [officers] get assignments that will make it easier to get a degree, such as tours as ROTC instructors."

After reading this revelation, I immediately called Infantry Branch at MILPER-CEN and asked to talk to the rascal who originated that statement. My intent was to have him tell my boss that I was in this "easy" assignment to get my master's degree. The branch representative to whom I spoke quickly assured me that the statement was erroneous and that all assignment officers had been instructed not to brief Infantry officers on easy degree programs as an inducement to accept ROTC assignments.

Let us put the myth to rest. ROTC is not a quick route to post-graduate degrees. What ROTC is is a demanding, challenging, enlightening, rigorous, satisfying, difficult, rewarding, motivat-

ing, and exciting assignment. It is also one of the most sobering experiences of an Army career.

One term that every Infantry officer understands is "mission." Over the past couple of years the mission for Army ROTC has changed. Consider the impact on a system that normally produces 8,000 officers a year when the mission is increased to 10,000 per year with no decrease in quality and no increase in training assets.

Although Infantry Branch is no longer promising degrees as an incentive for ROTC assignments, it does not have a solution to promotion and selection boards looking at files. Consider the reaction of board members looking at the file of an officer who just completed a three-year assignment with Army ROTC but does not have a master's degree, even though *INFANTRY* Magazine suggests it is automatic in this "easy assignment."

In an ROTC assignment the myth of a master's degree is just that. The challenge of accomplishing an important mission with few assets is the reality. Officers should fight to get the assignment for all the right reasons.

DAN GRIGSON  
MAJ, Infantry  
Temple University  
Philadelphia, Pennsylvania

## PICKETT'S (?) CHARGE

Sergeant Stephen Z. Bardowski's letter on the image of leadership contains a serious historical error (*INFANTRY*, January-February 1986, p. 5). In his statement that "General Pickett's plumed hat thrust high on his saber, heading for the angle at Gettysburg," served the purpose of letting his men know he was in charge, Sergeant Bardowski confuses the issue of "Pickett's Charge" and the man who actually led the assault on the angle.



General Lewis Armistead, one of Pickett's brigade commanders, was the man who led the heroic but foredoomed assault into that clump of trees, since immortalized as the high water mark of the Confederacy. General Pickett was never in the vicinity of "the angle," nor did he lead the assault named after him.

Let us give the heroic dead their just due.

ROBERT G. SMITH  
LT, Armor  
Fort Hood, Texas

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## SOLDIER'S LOAD

I would like to congratulate Captains Stephen P. Perkins and Christopher S. Barnhouse on two fine articles on the combat load of the American soldier in your January-February 1986 issue ("Standardize Combat Load," p. 16, and "Infantry in Action: Sustainability," p. 27).

Captain Perkins refers to the tendency of commanders to load their soldiers down with supplies to meet every eventuality and recommends a reduced combat load suited to actual need instead of possible need.

I agree with his recommendation that the standard combat load of the infantryman be reduced. From my own experience I can recall movements to contact in the noon heat of the Mojave Desert in which each soldier carried a rifle, seven magazines of ammunition, a flak jacket, a steel helmet, two canteens of water, a first aid pouch, two ammunition pouches, a poncho, and full marching pack filled with boots, uniforms, underwear, soap, and razor blades. Just carrying these loads made many of us sag like old men, and by the time we reached our objectives (sometimes miles away) we were often too exhausted to carry out our assaults with the proper speed and aggressiveness.

On one particularly long movement, I can recall mass heat casualties with a good part of the battalion incapacitated and requiring medical evacuation. Needless to say, our tactical movement became a rout to the cantonment area. Such occurrences are an unnecessary embar-

assment to military commanders and could be alleviated with a little common sense.

Captain Barnhouse cites historical examples in which excessive loads carried by U.S. soldiers actually inhibited their movement under fire and contributed to the sustainment of mass casualties in combat.

He points out that soldiers lose energy not only because of these heavy combat loads but also because of fear. Many of us can probably recall a time when a pervasive fear weakened us beyond the level that could be attributed to our physical exertion. This factor, too, must be considered in loading the combat soldier.

Ideally, this soldier should be concerned with moving only two items — himself and his individual weapon. All logistical items such as rations, ammunition, and medical supplies should be staged in rear areas and transported by support personnel, not by combat troops on the move.

Again, my congratulations to these two authors. I only hope the Army listens to them.

EDWARD PASCUCCI  
Cadet, ROTC  
Syracuse, New York

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## GUIDELINES

I would like to comment on Captain Stephen P. Perkins' "Standardize Combat Loads" in your January-February 1986 issue (p. 16).

Captain Perkins has obviously devoted a good deal of time and analysis to the question of the individual soldier's combat load. His argument is generally sound and his research is thorough, but he has set himself an impossible task. There is no such thing as a standard, Army-wide soldier's load, and it is foolish to maintain that our Army needs such a standard, *especially* for light infantrymen.

The one enduring principle governing the composition of the individual soldier's load is that it is utterly dependent on the factors of METT-T. Clearly, a light infantryman operating in Norway in the winter would bear a load significantly different from that of a soldier

fighting guerrillas in Central America. The light infantryman holding close terrain in Europe against a mechanized Soviet threat would organize his individual load much differently from the way a soldier deployed to a jungle or a mountainous theater of operations would organize his. Captain Perkins attempts to circumvent this principle by establishing five "restrictive assumptions." In so doing, he creates a completely artificial environment that ignores the lessons of history.

For instance, he assumes that "operational weather will remain moderate." A cursory look at modern light infantry operations shows that light infantry is more often than not intended for use in areas where the weather is anything but moderate — hot jungle, cold mountains, arctic tundra, desert — these are the environments where light infantry forces have been most active and where we can expect our own light forces to operate.

Consider the Chindits of the Burma Campaign in World War II. They conducted harassing attacks and interdiction against the Japanese rear area for months at a time in 1943 and 1944. Resupplied every five days or so by airdrop (primarily), the Chindits carried a load that averaged about 70 pounds per man. Because their operations took them over steep jungle trails and through almost impenetrable bamboo thickets in extreme heat, these 70-pound loads seemed unbearable. Yet they were absolutely necessary, given the mission, terrain, climate, and limits on resupply.

A few years later, the British infantry fought insurgents in Malaya and Indonesian raiders in Borneo. The changing situation then enabled them to reduce the individual load to an average of 50 pounds per man. In Borneo, the British SAS commanders were able to insist that the packs of their men be weighed before moving out on extended operations to see that no man carried more than 50 pounds. Experience tailored the load. Nobody, for instance, wore underwear in the jungle. Only two uniforms were carried. The clean one (sometimes a black jumpsuit-type coverall) was worn at night to sleep in. The wet, dirty one was redonned in the morning. Helmets were left behind in favor of jungle hats. Poncho-type



sheets substituted for sleeping bags, shelter halves, and ground covers. Nobody needed gas masks, gloves, sweat-ers, or field jackets.

Conversely, in extremely cold weather, it is hard to imagine that a soldier could avoid a load of 100 pounds or so, particularly if traveling cross-country over snow. Survival alone would demand heavier clothes, more fuel, skis, snowshoes, and such items.

Instead of standardizing an individual combat load, Captain Perkins would do better to advocate adhering to a few well-chosen guidelines. I offer a few for consideration:

First, every effort must be made to lighten the soldier's load through technology (lighter rations, lighter ammunition, lighter clothing) and ingenuity. Leaders at high levels must make a point of responding to the ideas of their subordinates on this matter.

Second, soldiers must be trained to do without the things they think they "need," and first-line leaders, platoon sergeants, and junior officers must be absolutely ruthless about what soldiers put in their rucksacks. Experience will go a long way toward training the soldiers, but leaders must constantly check and make corrections. Many soldiers, for example, will fail to carry enough water, and some will short themselves on ammunition.

Third, when the situation changes, the SOP should also change.

Finally, when the need for an item is in doubt, the soldier probably can get by without it. Food is a good example. Rations can be stretched, and the environment can usually be counted on to provide some sustenance. In many situations, light infantrymen can use the enemy's resources.

Above all, the light infantryman must not be so loaded down that he is continuously exhausted, inattentive, and unready to practice his craft. Observing these guidelines, I think, is a better approach to the problem of the individual combat load than trying to establish an Army-wide standard.

SCOTT R. McMICHAEL  
MAJ, Field Artillery  
Fort Leavenworth, Kansas

## RE-ARM M113

The M113-series armored personnel carrier is a grand and venerable vehicle, and many units will be equipped with it for some time to come. There is a problem, however, with its firepower — its M2 .50 caliber machinegun.

This weapon, when fired from a tripod (anchored with a traverse and elevation mechanism), is extremely accurate out to more than 1,600 meters. In its free-mount mode (non-anchored, pintle mounted) as it is on the M113, however, it is far less effective. Because of the recoil produced by the rapid firing of such a heavy bullet, not one in ten gunners, even with a significant amount of practice, can hit a target accurately at long range. In other words, a mechanized infantry platoon must close to within 500 or 600 meters to deliver effective support to another platoon. What good is fire support at such a short range to a unit that by its nature fights over much greater distances? And, of course, when a crew buttons up to protect itself from artillery, it loses *all* of its firepower.

The answer to these problems lies in history — with the M114A1 armored reconnaissance vehicle. It, too, had the M2 .50 caliber machinegun, but in a simple, hand-cranked cupola. The M2's backplate was simply removed and stored, and the gun was then slid into a cradle and anchored. In the back of the cradle was a solenoid, which when actuated pressed up on the trigger bar in the same manner as achieved by the manual butterfly trigger. The cupola was manually operated and had two crank handles — one for elevation and one for traverse. On one of the handles was a thumb switch that activated the trigger solenoid.

The weapon had three sights available: the normal integral iron sights on the receiver and barrel; a concentric ring antiaircraft sight; and a tubular iron sight that hung below the cradle (since it was visible through the vision blocks on the cupola, it could be used when the crew was buttoned up).

This same kind of manual cupola could be added to the M113 at little cost, and its advantages would be remarkable. With the weapon anchored, its accuracy at maximum range would be restored,

thus allowing the platoon a much greater degree of stand-off in fire support on an objective or in overwatch when maneuvering. In addition, the weapon could then be used when the gunner was buttoned up, enabling the mechanized platoons to maintain suppressive fires at the critical stages of an assault. The weapon's use in a ground mount would not be affected; it would simply be removed from the cradle, and its backplate would be replaced.

To speed the availability of the cupola to the field, it could be developed as a kit, to be installed under a modification work order by direct support units. The time and cost for development could be avoided by using the plans for the M114A1 as a basic cupola design. (This is fundamentally the way the turret traverse mechanism for the M901 ITV was built — from the turret traverse used on the M114A1E1 and its powered cupola.)

For only a few hundred dollars a vehicle, we could multiply the effectiveness of our M113-equipped units many times over. The cupola might not be glamorous, but it would work — and it could be ready almost immediately.

BARTON L. PEARL  
MAJ, Infantry  
Hq, U.S. Army, Europe

## USE OF ENGINEERS

I was disappointed by Major Robert J. Henry's article, "An Execution Matrix" (INFANTRY, September-October 1985, p. 34) — not because of his proposed matrix but because of his employment of the engineer platoon. I know he was only including the platoon for the purpose of his example, yet he demonstrates a mode of thinking that engineers and the engineer branch have been trying to eradicate for years.

The purpose of giving the engineer platoon to Company B was "to help the commander dig in his company." With three squads, four M113s, and a five-ton dump truck, the only thing they can dig in with is shovels. That's an inefficient, labor intensive, time-consuming effort.

The best use of that engineer platoon is out front emplacing obstacles and rein-



forcing the terrain, thereby increasing the lethality of the engagement areas. A good engineer platoon leader will advise the task force commander appropriately, but a better knowledge of engineer capabilities and employment will greatly improve the results when a maneuver commander uses his number one combat multiplier, the engineers.

**KURT E. NYGAARD**  
CPT, Engineer  
Fort Hood, Texas

## **25TH INFANTRY REGIMENT**

I am seeking information on anyone who was assigned to the 25th Infantry Regiment, made up entirely of black soldiers, in order to plan a reunion of all the regiment's remaining people.

Anyone who has this information may write to me at 1563 Warbler Avenue, Sunnyvale, CA 94087.

**HANK WINN**  
COL, Retired

## **FIRST DIVISION**

The Society of the First Division, composed of veterans of the Army's First Infantry Division (Big Red One), has

announced that the group's 1986 reunion will be held in Buffalo, New York, 3-7 September 1986.

Previously, the reunion had been scheduled for Charleston, South Carolina, but plans changed and the 1987 meeting will now be held there.

Information about either meeting can be obtained from the Society at 5 Montgomery Avenue, Philadelphia, PA 19118; telephone (215) 233-5444.

## **SOCIETY OF THE FIRST DIVISION**

## **222d INFANTRY REUNION**

A reunion of the 222d Infantry, 42d Infantry Division will be held at the Holiday Inn and Helidome West in Oklahoma City, Oklahoma, 9-12 July 1986.

Anyone who is interested may contact Al Brewer, P.O. Box 242, Mustang, OK 73064.

**JAMES McNICOL**

## **SPIRIT OF AMERICA**

"Spirit of America," the patriotic extravaganza that has thrilled Washington audiences for many years, will be performed 11-15 June at the Capital

Center in Landover, Maryland.

Daily performances will be at 8 p.m., with added performances at 2 p.m. on 14 and 15 June.

These performances are free, but because of the great demand, tickets are required. They can be obtained from Spirit of America, Fort Lesley J. McNair, Washington, DC 20319-5050. Dates and times desired must be specified in the order.

**PUBLIC AFFAIRS OFFICER**  
Military District of Washington

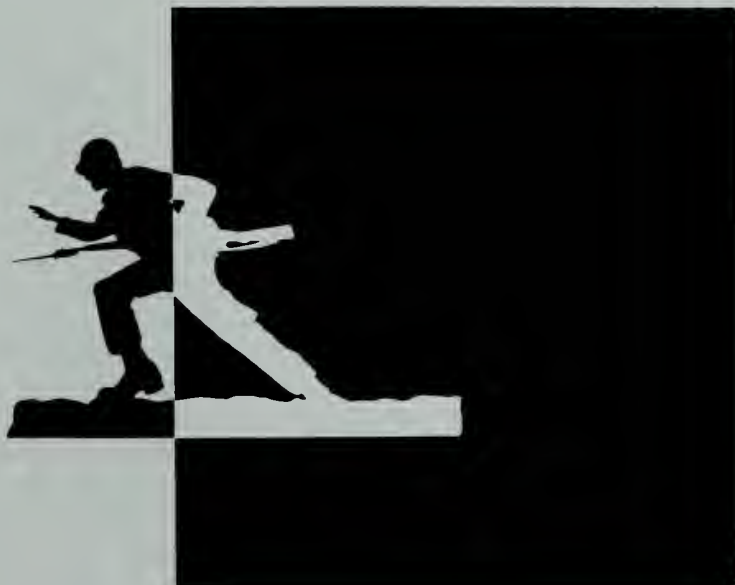
## **INFORMATION SOUGHT**

I am a freelance writer searching for military and civilian personnel who served in Laos and Cambodia during the Vietnam War — military aviators and intelligence officers, ground troops, CIA personnel, Air America pilots, MIA families, indigenous forces, U.S. Government authorities, and others.

The information collected from these people will be used for a history book and some related articles.

Please send letters in confidence to me at 4229 Albermarle Street, NW, Washington, DC 20016, or call (202) 966-2346.

**MICHAEL REED**



# INFANTRY NEWS



TWO DRILL MANUALS for Bradley squads and platoons have been developed by the U.S. Army Infantry School — TC 7-8, Bradley Fighting Vehicle Crew Drills, dated December 1985, and FC 7-21B, Bradley Infantry Fighting Vehicle Squad and Platoon Drills, dated May 1985 (with an errata sheet dated 29 July 1985).

Because the basic level of tactics for Bradley infantry is the platoon, most of these drills are oriented at platoon level. Some of them, however, are written to be applicable to both squad and platoon levels. This enables a squad leader to train his soldiers on their portion of a drill within the context of a platoon drill or operation. A few drills, such as "Conduct Initial Breach of a Mined Wire Obstacle," focus only on the squad. (See INFANTRY, July-August 1985, pp. 2-3, for details on Bradley organization and tactics.)

TC 7-8 provides a set of drills for the Bradley crew that are oriented on the Bradley system (both M2 and M3), including its weapons. FC 7-21B provides a set of battle drills and tactical drills (referred to in the FC as tactical training drills) for the Bradley squad and platoon leaders.

Battle drills are rapid, reflexive, immediate-action responses by a small unit to a critical combat situation. They are designed to be done the same each time to one Army-wide set of performance measures. Battle drills provide small units (team, squad, section, platoon) with a course of action they can take spontaneously in response to enemy contact (direct or indirect) or to the likelihood of contact in order to survive and win on the battlefield. They require minimal consideration of METT-T conditions or leader actions.

Tactical training drills are collections of critical individual or leader tasks that require quick but not immediate action responses to enemy contact. These drills

require more extensive consideration of METT-T conditions and leader involvement than battle drills.

FC 7-21B is to be converted to Training Circular (TC) 7-21B with a projected fielding date not later than December 1986. It will be available on pin-point distribution, and units can requisition the number they need. TC 7-21B will show which drills are considered battle drills and which tactical training drills. Meanwhile, an interim message has been sent to the field with this information. (See "Drills," INFANTRY, July-August 1985, for more details on the characteristics of drills and how to conduct drill training.)

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THREE COURSES now offered at the U.S. Army Infantry School train personnel on the technical and tactical aspects of the Bradley Infantry Fighting Vehicle:

**The BIFV Commanders Course** trains personnel in BIFV-equipped units in the skills they will need to operate and maintain the total system as well as to engage targets. The course provides transition training for squad leaders up through company commanders in the individual and collective skills they will need to perform their duties in a BIFV unit. The training includes maintenance, gunnery, and tactical tasks.

**The BIFV Gunners Course** prepares selected enlisted personnel to serve as gunners on the BIFV. It provides progression training for soldiers in MOS 11M and transition training for those in MOS 11B20 to become proficient in Skill Level 2 gunnery tasks.

The first phase of training instruction and practical exercise includes turret operation and maintenance along with weapons operations and maintenance. The second phase develops the gunnery skills a student needs to acquire and defeat threat targets. This training culminates in live fire training exercises.

**The BIFV Master Gunners Course** prepares a selected number of highly qualified noncommissioned officers to assist BIFV company and battalion commanders in planning and implementing gunnery training programs and maintenance training (turret and fire control).

Active Army and Reserve Component sergeants, staff sergeants, and platoon sergeants/sergeants first class who are qualified in MOS 11M and who are assigned to BIFV units are individually selected by the battalion commander to attend.

A BIFV Master Gunner receives extensive training on maintenance, gunnery, training management, range preparation, and tactics. (See article in this issue for details of this training.)

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LIGHT INFANTRY field circulars, posters and infantry material without numbers are available to units from the Training and Support Division, Office of the Secretary, USAIS, Fort Benning, AUTOVON 835-2141/1823 or commercial 404/545-2141/1823.

Units with questions pertaining to the light infantry concept may write to Commander, USAIS, ATTN: ATSH-I-V-LITF, Fort Benning, GA 31905-5007, or may call AUTOVON 835-4590/5298 or commercial 404/545-4590/5298.

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THE FOLLOWING NEWS ITEMS were furnished by the Directorate of Combat Developments:

- **TOE 07245J410.** The Bradley-equipped mechanized infantry battalion table of organization and equipment (TOE) has been adjusted several times since the Division 86 study group formulated the design. Most of the changes have been made under the banner of Army of Excellence (AOE). These changes, completed during October 1983, streamlined the battalion's combat



service support while reducing robustness and resiliency.

Several new changes were implemented during the most recent cyclic TOE update in October 1985. These were made to align the battalion's TOE, as much as practical, with the TOE of an M1-equipped tank battalion. The most significant changes made to the Bradley battalion are the redistribution of the administrative/logistical command post vehicle from the S-1 section to the S-4 section and an increase in the number of manpack radios for the transportation section of the support platoon. Additional changes either implement agreements for the basis of issue of night vision goggles and camouflage nets or are administrative in nature.

Future versions of the TOE will incorporate the combat field feeding system (CFFS) and will add master gunners to the rifle platoons. A platoon master gunner will be the platoon leader's present gunner, but that NCO's rank will be raised from sergeant to staff sergeant. He will also be a graduate of the master gunner's course and will become the rifle platoon's primary gunnery trainer.

The CFFS will give the battalion 16 food service personnel, 4 two-and-a-half ton trucks, 2 mobile kitchen trailers, and 8 water trailers. It will require augmentation in unit dining facilities for garrison feeding; in the field, the system calls for the operation of two teams, each of which can provide one hot tray pack and two MREs daily to the battalion's soldiers.

• **Bayonet.** A new multipurpose bayonet is expected to be issued to the field in October 1987. It is a significant improvement over the present M7 bayonet in that it has a wire-cutting capability and can be used as a combat field knife. (See *INFANTRY*, January-February 1986, page 9.)

The initial issue of the new bayonet will be restricted to infantry units, to close-combat forces in Special Forces operational battalions, and to selected combat engineer units.

• **SMAW.** The Directorate recently established requirements to field the shoulder-launched multipurpose assault weapon (SMAW) as an interim weapon for the multipurpose individual munition. The SMAW is in production and has

been fielded by the U.S. Marine Corps.

The SMAW was designed for use against fortified positions, but it has also been found to be effective against light armored vehicles. It consists of two major components — a launcher and an enclosed dual-mode warhead.

Priority of issue will be to light infantry forces (light infantry battalions, Rangers, and airborne and air assault units). The weapons will be used by dedicated antiarmor teams in the arms room concept as an alternative to the Dragon. Based on the expected threat, a commander will decide which weapon will be deployed into an operational area.

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FORT KNOX SUPPLEMENTARY Material 17-3-2, *Armor in Battle*, has been published by the Armor School. It is a 240-page anthology that discusses small unit armor actions from 1916 to the present.

Copies of FKSM 17-3-2 may be obtained from the Army Wide Training Support Branch, Fort Knox, KY 40121; AUTOVON 464-2914/5715 or commercial (502) 624-2914/5715. The FTS number is 354-2914/5715.

More information about this publication is available from Captain Gregory Smith, Leadership Branch, USAAS, Fort Knox, KY 40121; AUTOVON 464-5450 or commercial (502) 624-5450.

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THE 205TH INFANTRY BRIGADE, U.S. Army Reserve, has been designated the roundout brigade for the new 6th Infantry Division (Light) in Alaska. Each division in the roundout program has two Active Brigades and one Reserve Component. All of the Army's other roundout brigades are National Guard units.

Headquartered at Fort Snelling, Minnesota, the 205th is in one of the coldest regions of the continental United States and has the special cold weather equipment required in Alaska. It also has had previous planning and training relationships with the Active Army's 172d Infantry Brigade, which is based in Alaska and which will form the nucleus of the 6th Division.

The major units of the 205th that will convert to the new light structure include

the 3d Battalion, 3d Infantry; the 1st Battalion, 410th Infantry; and the 3d Battalion, 14th Field Artillery.

When fully organized, the 6th Infantry Division (Light) will consist of a headquarters and headquarters company, three light infantry brigades, a division artillery, a combat aviation brigade, a division support command, and various support units.

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THE PRESIDENT OF THE U.S. Army Infantry Board has given us the following news items:

**Squad Automatic Weapon.** A joint working group met at Fort Benning in September 1985 and proposed a series of modifications it felt should be made to the squad automatic weapon (SAW). It was determined that those modifications that could be made within six months would be tested by the Infantry Board during a concept evaluation program (CEP) test in December 1985, and that those modifications that required longer than six months to complete would be tested at a later date.

These were the modifications that were tested by the Board in December 1985:

- Changing the zeroing procedures so that the front sight can be adjusted by a spanner wrench that will be made available at the unit level.
- Increasing the clearance between the rear sight plate and sight knobs and replacing the detent pins with ball bearings to permit freer movement and better wear.
- Removing the link ejection port cover to eliminate the danger of the gunner's cutting his hand on it.
- Correcting magazine feed well tolerances and emphasizing the magazine insertion procedures listed in FC 23-10 to reduce the number of stoppages.
- Increasing the spring tension in the bipod to retain the bipod legs in the folded position.
- Crimping the last coil of the firing pin spring to prevent the inadvertent separation of the spring from the firing pin.
- Testing an improved tracer round that had a brighter signature and longer trace duration.

The test results will be used by the

Infantry School during its evaluation of the SAW modifications.

Testing of the additional modifications is planned to take place in July 1986. Among those modifications will be a barrel heat shield.

A CONTRACT WAS AWARDED recently to a commercial concern to produce the new official U.S. armed forces M-12 standard hip holster for the newly adopted 9mm handgun.

This ambidexterous holster features a completely modular design, allowing it to be worn on a wide or narrow belt, with or without flap, on belt or shoulder, and cross- or side-draw. The new holster is



made of an olive drab ballistic nylon fabric outer facing over a non-absorbent, closed-cell polyfoam core. It weighs eight ounces, is water resistant, and incorporates a flexible cleaning rod for the pistol's barrel.

The contract also calls for refining the M13 chest harness, which will enable a wearer to convert the M-12 from a hip holster to a chest holster for use in tanks and other military vehicles.

A pistol magazine pouch that incorporates the holster's quick-lock belt fastener is also included in the contract.

THE DIRECTOR OF THE National Infantry Museum at Fort Benning has furnished the following news items:

A French 75mm artillery piece and

caisson has been restored and displayed on the Museum grounds. Designed in 1897, this model weapon played an important role in World War I. It was considered the finest field piece in the world at the time because of its mobility and accuracy and the fact it could spit out 15 to 20 rounds a minute. In a postwar demonstration at Aberdeen Proving Grounds, a crack American gun crew achieved a firing rate of 25 rounds a minute. By World War II, however, a number of artillery pieces had been developed that outmatched it.

A Union sharpshooter's .50 caliber sniper rifle with telescope has been added to the Museum's Civil War section. It is part of a collection of articles used by Sergeant J.C. Nobel of Albion, New York, who was a member of Company G, 1st Battalion, New York Sharpshooters from August 1862 to June 1865. Other items in the collection are the bullet mold and powder flask that Nobel used, and letters that he wrote to his wife during that time. Also shown is a pair of wire-rimmed sharpshooter's glasses. Made especially for snipers, they have only a small circular viewing area cut in the lenses.

New additions to the airborne display section are a rare "balloon cloth" jump suit that was introduced in late 1941 by the 501st Parachute Battalion, and the jump uniform worn by Sergeant Hiram Duncan, Company E, 2d Battalion, 503d Parachute Infantry Regiment during a World War II combat jump into Markham Valley, New Guinea, on 5 September 1943.

Other recent acquisitions include a hunting knife used by a member of Merrill's Marauders in the China-Burma-India theater of operations during World War II; an unusual Nazi political flag that was taken by the donor in 1943 from the Bank of Rome Building in Naples, Italy; a World War II British parachutist's jacket; a Viet Cong flag captured by Advisory Team 43 in the spring of 1963; the uniform and jump boots worn by Colonel John B. Pratt when he parachuted onto Noemfoor Island on 4 July 1943; a pipe that belonged to Frank Merrill; some Chinese arrows that were fired at U.S. Infantrymen during the Boxer Rebellion; and a German MP40 subma-

chinegun captured at Anzio during World War II by a member of a Ranger unit.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273, AUTOVON 835-2958, or commercial 404/545-2958.

THE ARMY MATERIEL COMMAND (AMC) has chartered a product manager (PM) office for mortar systems. This office, called PM Mortars, is responsible for managing all mortar systems, including developing, producing, fielding, and supporting 6 weapon systems and 79 munition items.

It is located at the Armament, Munitions, and Chemical Command's Armament Research and Development Center, Dover, New Jersey.

A 40mm GRENADE MACHINEGUN used for some time by the U.S. Navy has been modified for Army use by the Armament, Research, and Development Center (ARDC). The weapon was developed in response to the 9th Infantry Division's need for a lightweight, man-portable weapon that could be used against enemy troops and lightly armored vehicles. Although the Navy weapon met that basic need, the gun required some modification to meet the extreme climatic conditions Army units expect to encounter in combat.

The modified version, a fully automatic, air-cooled machinegun, has a firing rate of about 350 rounds per minute. It is a multipurpose gun — antimateriel and antipersonnel — that can be used for offensive and defensive operations such as protection during movements of troops and supplies.

In addition to the ammunition currently used in the grenade submachinegun, the





Soldiers field test the 40mm grenade weapon system.

ARDC has developed a dual-purpose round to meet the weapon's antimateriel and antipersonnel requirements. This ammunition is now in production.

Upon detonation, the grenade projectile can fulfill its two missions simultaneously: A penetrator, formed by the force of the detonation, will destroy most lightly armored vehicles at a maximum effective range of about 1,500 meters (with an overall range of 2,200 meters); and the grenade projectile's serrated body

will break into many small fragments, disperse, hit, and incapacitate enemy soldiers within a 15-meter radius of the point of detonation.

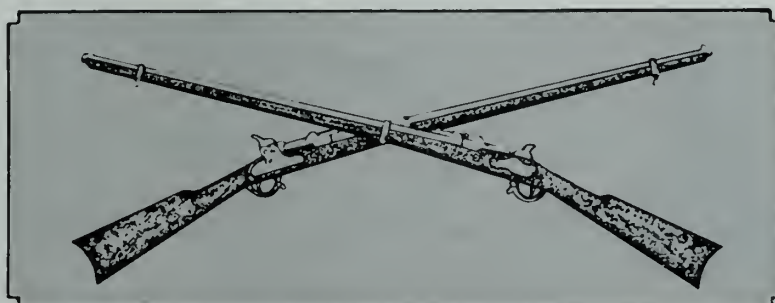
A practice training round has also been newly developed to simulate the flash, smoke, and sound of the grenade.

The grenade machinegun with its required ammunition can be transported easily on jeeps, trucks, or armored personnel carriers. In the 9th Division, it will be mounted on high mobility multi-

purpose wheeled vehicles (HMMWVs).

Because the weapon is lightweight, 7.6 pounds, two people can remove it from a vehicle mount and set it up on a ground mount within five minutes. Gunners zero in on and attack a target by firing three-to-five-round bursts.

The 9th Infantry Division is scheduled to get about 200 of these grenade machineguns with ammunition this summer.





## The Best Kept Secret

COLONEL FREDERICK PETERS

Some dramatic changes have been made in the Infantry Officer Basic Course (IOBC) in the past ten years — and with them also some changes in the role of the officers who are assigned to conduct that training. Still, too few Infantry officers fully understand what is involved in training newly commissioned lieutenants to take their places in the Army.

As a result, we at the School Brigade of the Infantry School must spend considerable time explaining it to everyone involved. This includes the majors and captains who are being considered (or have been nominated) for jobs as company commanders and platoon trainers in the Brigade's 2d Training Battalion. More important, it also includes the personnel managers and assignment officers at MILPERCEN who manage the careers of these officers and also the senior officers who must advise them and make critical decisions about their futures.

Today's IOBC is not the course many infantry officers will recall. Gone are the days when IOBC students were given most of their instruction in classrooms in Infantry Hall with a 1:100 or 1:200 teacher-student ratio, or in a bleacher-type environment on a range someplace on Fort Benning. The current course is a 16-week, hands-on, hard-skill, field-oriented program of instruction. Eighty percent of the training is conducted in the field by the IOBC company commanders and platoon

trainers, with the platoon trainers being the cornerstones of this drill-based training program.

The 2d Training Battalion (IOBC) is a TDA battalion consisting of five companies; each company has five platoons. During a training cycle, a company is assigned 180 to 200 newly commissioned Infantry officers to train. The company commander, an Infantry major, is expected to set the leadership tone and conduct part of the training. More important, to ensure that high standards are attained and maintained, he spends the bulk of his time supervising the five platoon trainers and the ten NCOs (two per platoon) who actually conduct most of the training. In his 18 months of company command, he will train more than 600 newly commissioned Infantry officers for the Active Army, Army Reserve, and Army National Guard.

### PLATOON TRAINER

A platoon trainer is an Infantry captain who trains and branch certifies approximately 40 lieutenants per cycle, or about 120 per year. He conducts more than 80 percent of the training for these lieutenants, the bulk of which is in the field, oriented on basic combat skills and tactics from fire team through platoon level.

The 16-week course of instruction in-

cludes six different field training exercises. (Only about nine days of the course are nontraining days, although we are looking at ways to further reduce weekend training.) The exercises begin with individual and crew-served weapons, individual skills, and movement techniques, and graduate through team, squad, platoon, and company operations. The platoon trainer must be an expert in all of these. He must have a grasp of the full range of weapons, drills, and tactics that platoon leaders might use in any of a multitude of missions or situations.

The student officers are introduced to a field environment during the second and third weeks of the course when they take part in numerous day and night navigational exercises and individual and fire team movements. These are followed by a series of practical certifications, qualifications, or familiarizations with Infantry platoon weapons. During the sixth and seventh weeks of the program, the training is devoted to NBC, communications, and indirect fire.

At the course's midpoint, the student officers themselves begin to feel the weight of their leadership responsibilities. The tactical leadership course, which consists of a series of 20 drills conducted over a period of seven days, gives each officer an opportunity to conduct tactical training in front of his peers. Given a tactical situation, a student officer instructs a



group of his peers in a combat-type drill, rehearses them on the drill, and finally executes the drill with that same group. Each student officer receives immediate feedback on his performance. During these seven days, a lieutenant is taught how to train, lead and fight, and how to build a cohesive team.

Up to this point a platoon trainer's role is primarily that of instructor. For the remainder of the course he serves as a mentor to his students. The four remaining field exercises are designed to train and develop each Infantry lieutenant in offensive and defensive operations from squad to company level. Each is exposed to various situations and terrain, including urban, and operates as light infantry, air assault, infantry, and mechanized infantry. The exercises include a doctrinal overview, tactical exercises without troops, terrain walks, and some free-play. A trainer's job is to stimulate each lieutenant's tactical thought process, a job made more challenging because of the great differences in the students' experience and military knowledge. (Infantry officers are commissioned from more than 370 different institutions and programs including the U.S. Military Academy, the Active Army officer candidate school (OCS) program, several state National Guard OCS programs, and a wide range of Reserve Officers' Training Corps (ROTC) programs. The ROTC programs, while similar in many respects, do vary from school to school.) Although their students start from these different points, it is the job of the platoon trainers to see that when they graduate the students all have the competence and the confidence to take charge.

It should come as no great surprise to anyone that the Infantry School emphasizes physical fitness in its IOBC program, and this is another aspect of leadership development in which the company commander and the platoon trainers are deeply involved. The recent emphasis on having Infantry lieutenants attend Ranger School has helped to focus and intensify the physical training program. (All Active Duty lieutenants completing IOBC are given a chance to attend the Ranger School before leaving Fort Benning.) Thus, the PT goal in IOBC is the same as the PT requirement for entering Ranger School. In



short, IOBC students get in shape, and stay that way.

In addition to intensive training, the course also offers some fun and relaxation. For example, company commanders, trainers, and their wives spend many duty and nonduty hours conducting a wide variety of social activities. These activities are designed to afford the student officers and their wives an opportunity to gain an understanding and appreciation for the Army's customs, courtesies, and traditions. We believe these activities enable the young wives to be much more at ease in the Army environment.

It is obvious, then, that IOBC company commanders and trainers are busy men. In fact, the intensity of effort, especially training, equals or exceeds that of any TOE battalion I have ever seen. For the Infantry captain, a tour as a platoon trainer is an excellent springboard for serving as a company commander, or a battalion S-3 or XO, or a brigade S-3. For the Infantry major, an IOBC company offers command in a dynamic, challenging training and leadership environment and is a wonderful opportunity to have a positive effect on the lives of some of our best young men. In my view, there are few positions in the Army that better prepare a major for battalion command.

Together, an IOBC company commander and his platoon trainers are responsible for developing combat Infantry platoon leaders who are tactically, technically, and personally competent; professional in appearance and behavior; physically fit; and confident of their abilities. By the very nature of their duties and re-

sponsibilities, and of their close relationship with young and impressionable officers, their influence is felt throughout the Total Army. In addition, these men are the true groundbreakers in the Army's new mentoring concept of training and development.

A captain who wants the challenge of learning while he develops newly commissioned Infantry officers may be a good candidate for the job of platoon trainer. (He must be an IOAC graduate competitive in his year group and must have commanded a company and preferably attended Ranger School.)

An Infantry major who is seeking the challenge of leading, training, and developing young officers; who wants to stay physically fit and keep abreast of new concepts of training doctrine; and who relishes the joy of training and leading may be a good candidate for the job of IOBC company commander. (He must be a graduate of a staff college.)

Any officer who is interested and meets these qualifications should give us a call. If he is accepted, I can assure him it will be one of the most challenging and rewarding jobs he will ever have.



**Colonel Frederick Peters** is commander of The School Brigade, U.S. Army Infantry School, at Fort Benning. He previously served in several staff assignments in the Department of the Army. He was a rifle company commander with the 1st Cavalry Division in Vietnam.

# Leadership Abrams Style

MAJOR GENERAL ALBERT H. SMITH, JR.  
United States Army Retired

In the closing months of 1969, following President Richard Nixon's summer visit to Saigon and to our armed forces then fighting in southeast Asia, decisions were made in Washington to start bringing U.S. troops home and to begin turning the war over to the South Vietnamese military forces.

During 1969, U.S. and South Vietnamese forces had been highly successful in operations conducted in all parts of South Vietnam. It seemed to those engaged in the fighting that the war was being won. With the news of the pending U.S. withdrawal, however, the high morale that had characterized U.S. forces until that time was noticeably dampened. No soldier looks forward to a hard fight when rotation is in the offing.

The commander of the United States Military Assistance Command, Vietnam (COMUSMACV), General Creighton Abrams, recognized that there would be difficult times ahead for the Army's leaders, and especially for those commanding companies, batteries, troops, and detachments engaged in combat operations. He also felt there would be similar problems among troops assigned to headquarters and support units. Not as productively busy as when the war was being fought, they too might find time to get into trouble. He knew that the desire to get home would be universal among all of our soldiers then in South Vietnam.

General Abrams wanted to meet with every commander down through the company level to reemphasize the fundamental principles of leadership that would assist, encourage, and reassure them as they coped with the difficult

times ahead. But that was physically impossible.

General Abrams, therefore, decided to put his message in a short letter, a copy of which would be sent to every U.S. commander in South Vietnam. He made it clear at the time that he did not want intermediate commanders changing his words.

After looking at and editing several draft letters, General Abrams was finally satisfied, and his approved letter, dated 20 January 1970, was reproduced and distributed.

The effort made to get the letter out did not stop with its distribution from General Abrams' headquarters. Special measures were taken, including spot checks in all major units, to ensure that every U.S. company-level commander had received his personal copy. Thereafter, the chain of command, from MACV down, took appropriate action to see that the guidance in the letter was understood and followed.

Here is that letter:

*Leadership demands our constant attention, especially at the small unit level. It is here that a leader can influence most decisively and directly the conduct, performance, and welfare of his men.*

*Today's serviceman is the best educated, most intelligent, and most independent who ever served this country. He shows the same dedication and willingness to bear hardship and make sacrifices as his predecessors, but he wants to be recognized as an individual and to know "the reason why." Today's leader must take these traits into consideration.*

*This does not mean that there can be any degradation of standards. The leader must insist upon a discipline that will guarantee mission performance under trying conditions. He must deal with infractions promptly, fairly, and firmly.*

*Between the higher levels where decisions are made and the lower levels where they are carried out, the word doesn't always get through. There is often a block at the junior officer-NCO level which prevents the downward communication of requirements and the upward communication of reactions and ideas. Some leaders feel that explanations are unnecessary and that complaints reflect adversely upon their own leadership abilities. The same chain of command which passes orders down to the men must also pass their reactions up to the commander.*

*To compensate for this, some commanders use an "open door" policy; they will talk with anyone who comes in. But some men hesitate to penetrate the real or imagined obstacles between themselves and their commander. The "open door" works best when it swings both ways. A man must feel that he can frankly present complaints and ideas to his commander. On the other hand, the commander must get out and talk to his men, get them to talk to him, and find out what is going on. The result of this two-way contact will be mutual respect and mutual trust.*

*Another approach is the "open forum," a recent example of which is the junior officer council. This is an excellent means of improving understanding, but it must be kept under close command control and*



*supervision. The "open forum" cannot be allowed to become an organized protest session; commanders must guard especially against the outsider who would use this as a device for mass agitation.*

*Men in combat or hard at work have little time to reflect on their problems, real or imagined, because they are too busy. But when the tempo of fighting and working decreases, they have time to reflect. Little things are magnified. Rumors start. Tensions mount. Requirements come to be regarded as intrusions on individual rights.*

*The average American serviceman will believe what his leaders tell him as long as they do tell him. He must be told the reason for promotions, rewards, and punishments. He must be told what is expected of him and what he can expect from his leaders. The leader must take an*

*active role in explaining his actions and his plans. He must get the word to his men and forestall rumors which inevitably arise when there is no explanation.*

*Our servicemen have met the test, and they will continue to do so in the future. They will do their job even better and with less friction when complete and mutual trust exists between them and their leaders.*

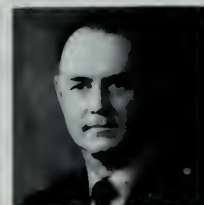
*The mission of every leader is to get the job done, to get the word out, and to treat every man justly and with a full appreciation of his individuality.*

Having had the good fortune to work for General Abrams in 1966 when he was Vice Chief of Staff of the Army and again in 1968 when he was COMUSMACV, I was able to observe his military char-

acter and leadership under a wide variety of conditions.

General Abrams was eminently fit for the responsibilities and the loneliness of high command positions, intellectually as well as psychologically. He was professionally competent in the highest degree and was willing to expend the effort required to command.

He will take his place in our military history as a great and good man — a leader for all seasons.



**Major General Albert H. Smith, Jr.**, U.S. Army, retired, was J-1, MACV, from July 1969 to March 1970. He also served in Vietnam with the 1st Infantry Division as assistant division commander and acting division commander. He is now Honorary Colonel of the 16th Infantry Regiment.

# Combat Motivation

MAJOR ROBERT L. MAGINNIS

Lieutenant Eli L. Whitely was a platoon leader in the 3d Infantry Division in World War II. In December 1944 he was leading his platoon in savage house-to-house fighting through the fortress town of Sigolsheim, France. When his platoon came under intense mortar and machinegun fire, he responded by charging into a building alone and killing two enemy soldiers. Then he stormed into a second building, capturing eleven and killing two more, and into a third building, killing five and forcing twelve to surrender. These actions earned him the Medal of Honor.

When asked why he did these things, he said simply, "My motivation was to keep alive." It would appear, however, that there was more to it than that; in fact, he risked losing the very life he desperately wanted to preserve. (After all, his was not exactly a *safe* course of action.)

Understanding the actions of soldiers

in combat is not a simple matter, because combat effectiveness appears to be more than the sum of its parts. We therefore need a holistic approach to understanding the subject — looking at the parts in relation to the whole. One such approach is to examine the interaction of three critical aspects of combat effectiveness — the battlefield itself, the technology we use on that battlefield, and the motivation of the soldiers fighting there.

Although Lieutenant Whitely's World War II battlefield was demanding, it pales in comparison with the one we can expect in the future. That battlefield will depend on initiative, depth, agility, and synchronization. Operations on it will be rapid, unpredictable, and violent. It will be characterized by significant dispersion, confusion, uncertainty, and unprecedented, discontinuous, rapid change. Past techniques that were based upon drill, rote, and continuous supervision

will become obsolete, and the focus of decision and control will shift downward toward the squad and the platoon. It is at these levels that future wars will be won or lost.

As for technology, the nature of the future battle will be complicated by the rate at which technology changes. This evolution in deployment methods, associated hardware, and organization will continue to be unprecedented.

The qualitative superiority these innovative systems may provide cannot ensure victory in battle, however. They will be only as good as the soldiers who use them, and soldier performance is difficult to measure.

The problem is that neither the battlefield nor the technology we will use on it can be understood completely at any given time. This leaves us with the third aspect — combat motivation — as our best chance to influence future perfor-

mance. A proper understanding of combat motivation will allow us to anticipate the actions of our soldiers and to increase their effectiveness on the future battlefield.

Why do soldiers fight?

Several studies conducted in the past reveal a variety of reasons, and these findings provide a reference point for today's leaders to use in trying to understand how they can influence tomorrow's soldiers.

After the Spanish Civil War, 300 of the Americans who had volunteered for service in the Abraham Lincoln Brigade participated in a study entitled "Fear in Battle." These volunteers indicated that good leadership was what motivated them. They said that good leaders provided frequent instructions (especially in tight situations), were admired and respected by the men, were experienced, and saw that the soldiers were provided with food, shelter, and other amenities. Most of the men agreed that "knowing the morale of your outfit is high" makes better soldiers.

The soldiers also indicated that they were better fighters because of their fear that if they showed weakness they would endanger the lives of their friends. This was especially true when they were under fire. The study concluded that proper motivation is important in any learning process and that fear is a strong motive if it is working on the right side.

Later, after World War II, many combat veterans, when asked what was most important in keeping them going, named ending the task, solidarity with the group, thoughts of home, and a sense of duty and self-respect. The researcher concluded that the informal group served two functions in combat: It set and enforced group standards, and it supported and sustained the soldier in stressful situations he otherwise might not have been able to withstand.

Vietnam provided similar results. One young soldier said, "We fight for each other. We're really tight here. Nobody else cares for us." In his Vietnam biography *The Killing Zone*, Frederick Downs said, "My job as platoon leader was to control the spectrum of emotions, to guide the men to survival." He also said that "the company commander could

command his company more effectively because he got to know the men and their weaknesses and strengths." This supports Colonel Ardant du Picq's assertion that "when soldiers know they have support they are better fighters."

Various attempts have been made to reduce these ideas on combat motivation to some sort of system that commanders and leaders might use to predict and somehow improve their soldiers' combat effectiveness. In fact, the Center for Army Leadership has adopted a combat motivation model for use in the Army's officer advanced courses.

The model consists of four parts — the soldier, his immediate task, his desired outcome, and the other people around him (his leaders, peers, and subordinates). In addition, the model includes three forces that affect these four parts — the influence of the others on the soldier, the value the soldier places on a particular outcome, and his confidence in his own ability to perform the task to the required standard (see sketch).

It may be useful to Infantry leaders to examine these interacting parts and analyze the three forces that influence them. For purposes of illustration, we will use Lieutenant Whitely's World War II situation.

The first part, the soldier, is more than just the man — it is the *whole* man, his personality and temperament, his training experiences, and more. To fully understand Whitely's actions on that fateful day, we would have to have some understanding of these things.

The second part, the soldier's immediate task, was, in Whitely's case, to halt the enemy's resistance. His minimum effective performance in that case had to include actions that would maintain positive control of the men and a decisiveness under fire that would result in the suppression of the hostile fire without undue risk to the platoon.

As for the soldier's desired outcome, Whitely said he was motivated by a desire to survive, but his actions did not appear to support this outcome. It is more likely that he connected his survival to the rapid termination of the task. Or his desired outcome may have been saving the lives of his men and keeping their respect and trust.

The fourth part of the combat motivation model is the role played by the others around a soldier — leaders, peers, and subordinates. Whitely may have risked his life because that is what infantry platoon leaders are supposed to do. Maybe he just did not want to let his commander and his soldiers down.

The first influencing force on a soldier also comes from these other people. They may persuade him to perform the required task or convince him that his performance (to standard) will lead to his desired outcome. In Whitely's situation, he had previously demonstrated his ability to clear buildings of enemy troops. It was not an unfamiliar situation. (He intuitively understood the connection between clearing the buildings and terminating the enemy's resistance.) Additionally, his previous exploits had established a precedent. His soldiers had grown accustomed to his initiative and decisiveness. Anything less would have been out of character for him. Whitely therefore placed himself into a complex relationship in which he was forced either to clear the buildings or to risk losing his credibility.

The second influence, the intrinsic value the soldier places on the desired outcome, is also strong. For Whitely this was the termination of the enemy's resistance. He understood from past experience that his combat prowess (his effective performance as an infantry platoon leader) would lead to the desired outcome. This influencing factor is essentially the result of all the pluses and minuses associated with personal actions and their connection to a valued outcome.

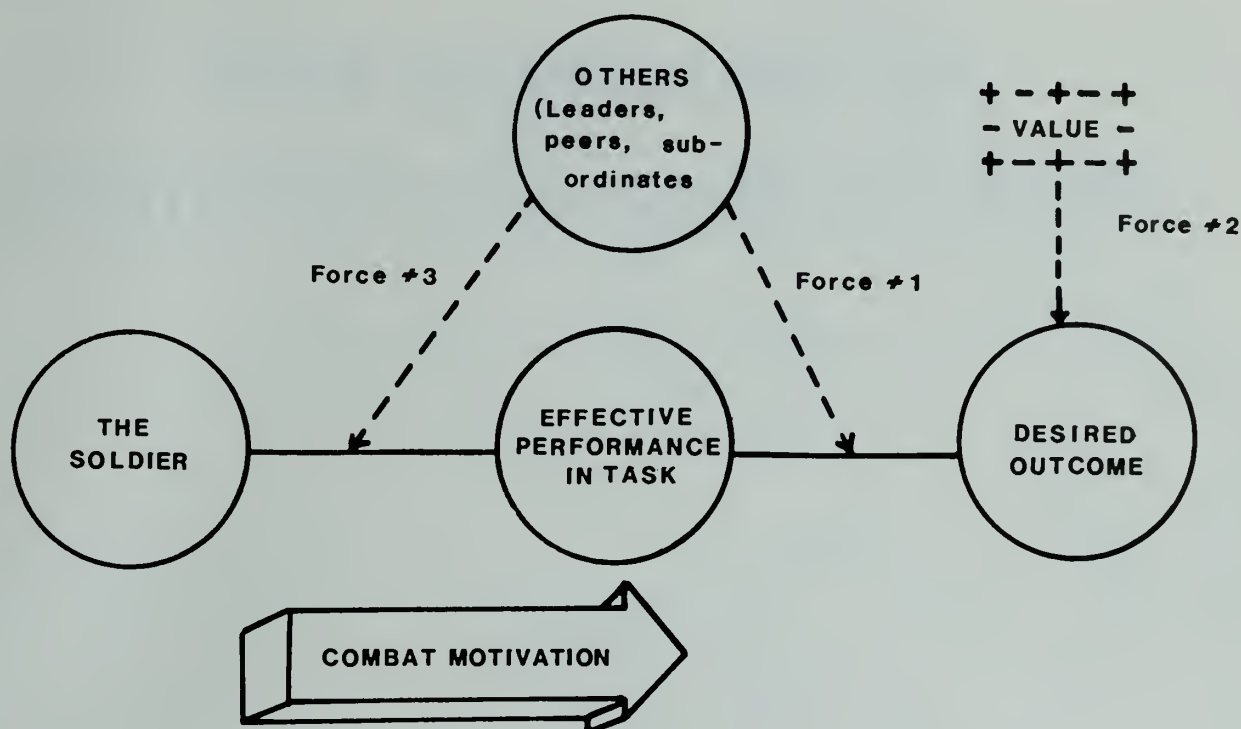
The third force, the soldier's confidence in his ability to perform his immediate task to standard, results from his past training experiences, encouragement from others, and his own assessment of the situation.

The combination of the four parts of the model and the three influencing forces explains why Whitely fought so hard.

But how can we take this model and the knowledge of motivation gleaned from earlier wars and apply them to our task of predicting and improving combat motivation among our soldiers today? There are several ways:

- We must take a new soldier and





### Combat Motivation Model

equip him with high-quality training so that he will be confident in his abilities and his equipment. We must give him opportunities to act independently, to make decisions that support the accomplishment of his assigned tasks, and to become comfortable with taking the initiative.

- We must make sure this soldier understands what we expect of him. This begins with mundane matters and spills over to actions that lead to effective combat performance. We must not expect perfection at first but must encourage him as he learns to perform to our high standards.

- We must keep the soldier's attention focused on mission accomplishment, helping him to see that he can achieve his personal goals and the unit's goals at the same time and harmoniously. Persuading him to buy into the unit's goals is critical to this task.

- We must either influence the things he values or replace what he values with something we can influence. If he values time off, official recognition, or on-duty educational opportunities, then we must show him how these things are related to his performance and follow through by

delivering the desired outcome in exchange for his effective performance.

- We must understand how important trust in his leaders is to him. Soldiers will follow us if our integrity is above reproach, if we are technically competent, and if we consistently demonstrate that we take care of him. Building trust takes a long time but losing it often takes no time at all. The key is consistency. The trust and confidence we earn today will follow us into battle tomorrow.

- We must try to build small teams and keep them stabilized as long as possible. The longer soldiers have worked together and the better they know one another when they get to the battlefield, the better they will fight. This is an unwritten principle of the profession.

If we consistently try to do these things, our ability to motivate our soldiers in combat will be simpler. We must continue to earn the trust of a soldier, keep him informed, provide for his needs and comforts as best we can, and listen to him. We must also set the example by keeping our own morale high. A well-practiced voice of authority when in contact with an enemy force will get results

and maintain the soldier's confidence.

The success or failure of a small unit depends to a marked degree upon the leader and what he does. His job is to help the soldier anticipate, understand, and cope with danger and fear. The important thing is for a leader to control a soldier's fear and use it to advantage. A leader who understands why soldiers fight can capitalize on this understanding and motivate them to fight and win.

Maurice de Saxe said, "The human heart is the starting point in all matters pertaining to war." A proper understanding of motivation opens the door to a soldier's heart. Leaders who use their understanding to improve the combat effectiveness of their soldiers can bring excellence to the Army and victory to the battlefield.



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# Productivity and Mission Accomplishment

CAPTAIN JOSEPH P. AVERY, United States Air Force

Having had some experience in the Army as well as in the Air Force, I believe the problems of management, leadership, and training are pretty much the same in both services. In fact, I got the idea for this article as a result of reading the excellent article by Captain Samuel K. Rock, Jr. — "Training New Lieutenants" — published in the November-December 1984 issue of *INFANTRY*. I was surprised at how well the particulars of his training article also applied to new lieutenants in the Air Force.

I recently completed an assignment as a missile maintenance officer with a Minuteman missile wing at Minot Air Force Base, North Dakota. I found that assignment particularly challenging, partly because of a work area of hundreds of square miles and partly because of the weather, which varied from nearly 100 degrees below zero to 100 degrees above. During extended periods of cold weather, cabin fever developed among the personnel, maintenance became difficult, and morale problems increased rapidly.

But as a former paratrooper in the 82d Airborne Division, I realize that these leadership and operational problems are quite similar to those that confront commanders in the Army's combat arms — accomplishing the mission, maintaining readiness and morale, and squeezing as much productivity as possible out of their subordinates.

No matter how harsh the environment, the first priority for any leader is to accomplish his mission or, to state it

another way, to avoid mission failure. And in peacetime or wartime, the causes of mission failure are many.

For example, a careful review of some marginally successful U.S. or joint military operations in Europe and North Africa during World War II reveals that mission failure or near failure could often be attributed to one or more of the following specific causes:

- Communications failure.
- Decision-making failure.
- Intelligence and information failure.
- Preparation and contingency failure.
- Insufficient training and discipline.
- Improper coordination.
- Equipment failure.
- Leadership failure.
- Individual failure.

During Operation TORCH in Northwest Africa, for example, a paratroop task force was enroute to Algeria, assuming that the French would not oppose the landings, when in fact the French decided to do just that. Unfortunately, the task force was not notified of the change because a shipboard radio operator had not been assigned the correct radio frequency to alert the planes as they flew over the Mediterranean. There are also other examples, of course — the military intelligence fiasco and radio communication failure during Operation MARKET-GARDEN, and the incident in which members of the airborne 504th Regimental Combat Team over Sicily were fired upon by their own ground troops and naval forces.

Air Force missile commanders and

Army infantry leaders today face some of these same problems because of faulty equipment, information that is not properly disseminated, and personnel who are injured because of inadequate training or discipline. These problems, in turn, can seriously affect a unit's productivity, and, thus, its ability to accomplish its mission.

Fortunately, there are certain steps that leaders and supervisors can take to achieve greater productivity and help overcome the problems that often lead to other failures. These steps involve greater emphasis in the areas of organizational communication, integration of tasks and activities, and personnel motivation.

Effective management and leadership techniques provide the foundation for organizational productivity. But what combination of procedures and personal characteristics actually makes a manager or a leader effective? Although I cannot identify a set of traits that *all* successful leaders possess, most highly successful leaders do seem to have in common the following six characteristics:

**They respect all people.** Successful leaders consistently demonstrate a genuine respect and admiration for *all* individuals, regardless of their particular jobs or ranks or social positions. Unlike some managers, they do not feel they are "lowering" themselves when they communicate with or praise their subordinates. They tend to view themselves as being on the same level, but with different or higher levels of responsibility.



Their basic attitude is, "We are all members of the same team, so let's work together to accomplish the mission."

**They take pride in their work.** Successful leaders perceive their work as representing *them* and reflecting their dedication to the job. As a result, they take considerable pride in their work and demand from their subordinates high quality products and performances.

**They trust and develop their subordinates.** Successful leaders believe that unless they demonstrate trust and confidence in their personnel, the productivity or effectiveness of their organization will never even near its peak, and they themselves will never receive the respect they need to lead effectively. They expect the temporary failure of new or inexperienced personnel, however, realizing that initial failure often toughens an individual, provides wisdom, and eventually improves his long-term productivity and worth. (History has proved that from the ashes of failure rise some of mankind's most outstanding achievements and triumphs.)

**They hold people accountable and permit them to do their jobs.** A leader's function is not to do everyone else's job but to make sure each person does his own job. Regardless of a leader's management position, unless he holds people accountable for their work, permits them to do it, deals with them on an adult-to-adult level, and disciplines them when they need it, he will find that gaining their respect and loyalty will be difficult, if not impossible.

**They appreciate people.** Successful leaders continually display a sincere appreciation for the daily productive efforts of others. They do not feel uncomfortable praising their subordinates when praise is appropriate. These successful leaders



show appreciation not only for a person's exceptional and special efforts, but also for his everyday contributions.

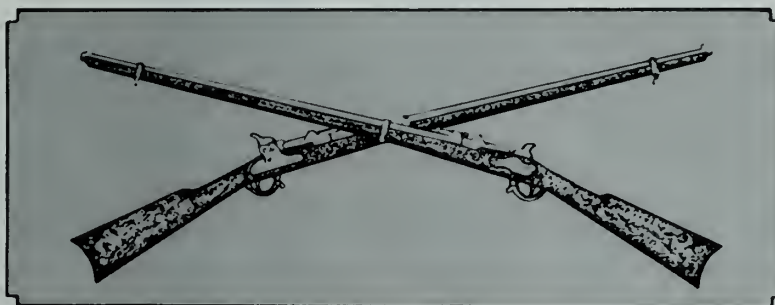
**They know what is going on in their organizations.** The best managers and leaders do not sit in their offices waiting for the world to come to them. They get out and see what is happening. By visiting work centers, communicating with people, and discovering both the problems and the promising areas, managers soon become more knowledgeable about their organizations. They also reap the added benefit of not having to hold as many meetings to get things done.

These six keys to productivity are not

the entire answer, of course, but these observations may serve to provoke the thoughts of both new and experienced Infantry officers and improve their effectiveness in their respective organizations. This improvement, in turn, should lead to more effective mission accomplishment.



**Captain Joseph P. Avery, USAF,** is assigned to the Air Force ROTC Detachment at the University of North Carolina. He holds a master's degree from Rutgers University.







# BRADLEY INFANTRY ON THE AIRLAND BATTLEFIELD

**COLONEL CARL F. ERNST**  
**MAJOR DAVID M. WHITE**

These are exciting times for the infantry, for we are part of an Army that has recently made a commitment to change in three vital areas.

First, we have returned to a doctrine of maneuver warfare and have embodied this doctrine in a new FM 100-5, "Operations." As part of this new doctrinal orientation, we have returned to a study of the operational level of war, a concept we had neglected for many years. In addition, our AirLand Battle doctrine has reemphasized our need to work more close-

ly with our sister services and our allies. There has also been a new emphasis on the lessons of military history as well as a new appreciation for many of the classical military writers, such as Clausewitz, Sun Tzu, and Du Picq.

Second, we have reorganized our fighting units under the Army of Excellence (AOE) plan. Our combat divisions and maneuver battalions are now more streamlined, with a higher tooth-to-tail ratio and with more flexibility and depth. We have also added combat forces to our Army, especially light divi-



sions and Special Operations Forces (SOF).

Third, we have begun the greatest force modernization program in our history, a program that will take the Army into the 21st century outfitted with the best weapons and equipment in the world. The M1 tank, the M2 and M3 fighting vehicles, the Apache and Black Hawk helicopters, and the MLRS and Patriot weapon systems represent only a few of the many new systems we are now integrating into our Army.

Our heavy forces have been significantly affected by this combination of new doctrine, organization, and equipment. And while it will be many years before all of our tank and mechanized battalions have the new tanks and fighting vehicles, all of us must consider today how the combined arms team will operate on the AirLand battlefield.

From the infantryman's point of view, this means considering how mechanized infantry units equipped with the Bradley fighting vehicle will operate on that battlefield.

## THE BRADLEY

The Bradley fighting vehicle (BFV) represents the most dramatic improvement in the infantry's combat capability since the introduction of the machinegun. For the first time in our history, the infantry has a true fighting vehicle. Its firepower, speed, and armor protection, when combined with its ability to carry infantrymen into battle, make it an extremely lethal fighting system. The BFV is not just an improved APC; it has caused a radical change in the way our mechanized infantry forces operate.

Despite its increased capabilities, the BFV has certain limitations that must be considered in its employment. It is not a light tank. Although it is quick and agile and has an impressive array of weapons, it does not have the armor protection that allows it to travel around the battlefield like a tank. Therefore, its crew must use covered and concealed routes when possible, and hull-down firing positions. The vehicle cannot be expected to move across open ground against an entrenched and prepared enemy if the enemy has good long-range antiarmor shots. The Bradley's survivability is provided by its proper employment to include careful positioning, clever use of the ground, and effective overwatch techniques. (See also "Fighting the IFV," by Captain Robert P. Sedar, *INFANTRY*, September-October 1981, pp. 34-37, and "Training Strategy for the IFV," by Lieutenant Colonel John D. Fuller, *INFANTRY*, September-October 1980, pp. 15-19.)

But it is the increase in vehicle capability and complexity that has led to fundamental changes in the way mechanized infantry does business. The BFV requires a fully trained three-man crew to properly fight the vehicle, yet at the same time it carries a rifle team whose primary role is to dismount and fight on the ground. The leadership of the Bradley squad must be balanced between the fighting vehicles and the dismounted rifle team.

Many of the old methods of command and control and the old roles of leaders must change to accommodate this new and powerful system. One of the major changes is that the basic level of tactics for Bradley infantry is the platoon. Below this

level Bradley squads execute drills, which are like the set plays called in the huddle of a football game. They allow the Bradley squad to react quickly and efficiently to the kinds of situations it can expect to encounter often on the battlefield. (See "Drills," by Major Royal A. Brown III and Captain Mark E. Crooks, *INFANTRY*, July-August 1985, pp. 35-38.)

## PLATOON TACTICS

The Bradley platoon provides both the structure and the organizational flexibility to execute modern maneuver warfare. The platoon is equipped with four M2 Bradley fighting vehicles and organized with a platoon headquarters and three Bradley squads. The platoon leader with his headquarters and attached personnel are mounted in one BFV and the squads are mounted in the other three.

Each Bradley squad has one vehicle and nine Bradley infantrymen (11M). It is divided into a vehicle crew and a rifle team. A squad's leadership consists of a squad leader and an assistant squad leader. During mounted operations, the squad leader normally is part of the vehicle crew and acts as the vehicle commander while the assistant squad leader takes charge of the rifle team.

For hasty situations, where there is no time to plan, the rifle team always dismounts and is led on the ground by the squad leader. The assistant squad leader remains with the BFV. For deliberate situations, when adequate planning time is available, the placement of the squad leaders varies with the situation.

When organized for combat, the platoon realigns its leaders to facilitate the command and control function and to accommodate the control of the dismounted infantrymen. The key leaders are positioned to ensure that the critical vehicle commander positions are always filled with experienced and trained personnel. For example, the platoon leader is mounted in BFV #1, the platoon sergeant in BFV #4. The platoon master gunner, a new position in Bradley infantry units, and the assistant squad leader from BFV #4 (3d squad) assume control of the platoon leader's vehicle when he dismounts.

(Both the BFVs and the tanks in a task force use the same standardized numbering system to simplify command and control when they work together.)

The platoon's Bradleys fight in relation to its dismounted infantry elements. Thus, they can overwatch the dismounted rifle teams at ranges out to 2,000 meters, which lets the platoon leader use his infantry in restrictive terrain while employing the BFVs in more open, high-speed terrain.

The platoon moves and fights mounted whenever possible. When all of the platoon remains mounted, it fights as a single force under the control of the platoon leader. Rifle team members aid the crew in reloading the vehicle's weapons, man the firing port weapons, provide security, and remain oriented by looking out through the vision blocks.

When the tactical situation requires the platoon leader to dismount his platoon, he must make sure there is a complete crew (three men) in each Bradley so they can provide a base of fire and fight on the move if they must. In most cases, the platoon

leader will be with the dismounted element, because the dismounted action will usually be the most critical. The platoon sergeant will remain with the base of fire element, which normally consists of the Bradleys, although the platoon leader will exercise overall control of both elements.

In deliberate situations, where the platoon leader has an opportunity to analyze the factors of METT-T and to assess the effects of reorganization, and enough time to inform all platoon members of a temporary change in command relationships, he may choose to deviate from the normal hasty dismount command relationships.

For example, in offensive operations:

- If a mounted maneuver using BFVs is planned in conjunction with a dismounted assault, the platoon leader may choose to stay with the vehicles while the platoon sergeant maneuvers or infiltrates the dismount element to a position of advantage where they can set up a base of fire to allow the BFVs to move against the enemy force.

- If during night dismounted operations a link-up with the BFVs is planned to occur during daylight or when support from the BFVs weapons will be limited, all of the principal leaders may dismount.

- If in other operations the company commander's intent dictates rapid mounted movement, the platoon leader may choose to dismount only small security teams under their own leaders and try to bypass any resistance, even though there may be some risk.

Generally, in the defense, a platoon leader will have more opportunities for deliberate action, and he can adjust his mounted or dismounted organization more often.

Since defensive operations involve dismount operations that are usually position oriented, though, the maneuver element in the defense is most likely to be the BFV element. When this is the case, the platoon leader may choose to be with the vehicles to control the vehicle fight, leaving the platoon sergeant to control the dismounted elements. In addition, selected BFVs may be given an additional crew member each to load the TOW launcher if a heavy vehicle fight or long-range antiarmor fires are planned.

Regardless of the organizational method he uses, a platoon leader retains overall control of his platoon. An exception to this rule is a case in which the dismounted elements from several platoons are placed under the direct control of either the company commander or the company executive officer.

## COMPANY TACTICS

The platoons themselves will normally operate as part of a company or company team. In a company team organization, the mechanized infantry platoons in the offense will operate with one or more armor platoons, and the company team commander will specify the combination of tank and infantry units he wants to use during any particular operation. For example, in a deliberate attack, he may direct that the tanks lead across the line of departure. If the terrain becomes restrictive, he will dismount his infantry to clear the restricted area, and the tanks will follow. Once beyond the restricted area,

the infantry will remount and the tanks will again lead to the next dismount point.

For an assault on an objective, the dismounted infantry will move forward along covered and concealed routes to support a tank assault with close overwatch fires. The BFVs, meanwhile, will support the assault from long overwatch positions.

The BFV, because of its turret weapons, offers a number of defensive employment options not previously available to a combined arms team. These weapons allow the vehicle to fight against the enemy on its own, while the dismounted infantry elements fight the enemy in restricted terrain.

In the defense, Bradley units have four basic employment options: BFVs and dismounted infantry elements can be on the same battle position covering the same avenue of approach; on the same position covering different avenues of approach; on different battle positions covering the same avenue of approach; or consolidated at company team level.

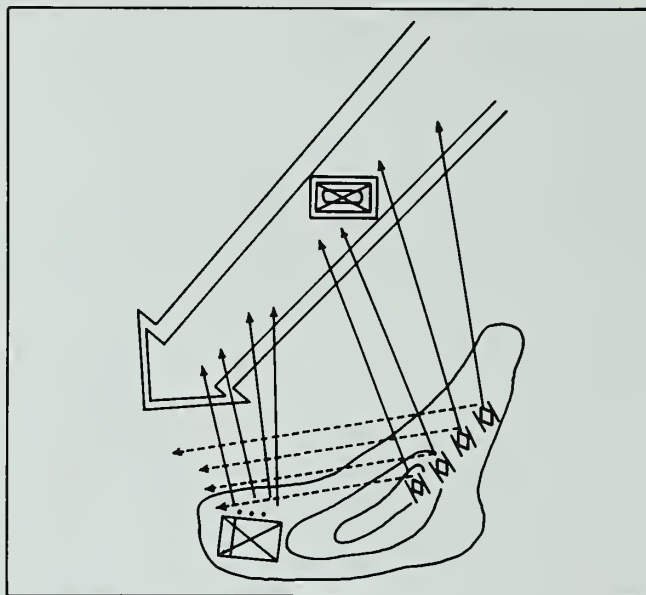


Figure 1. Same battle position, same avenue of approach.

The first of these options — same position, same avenue of approach — which is the usual one for M113 units, covers a wide range of tactical situations and provides the best security for the vehicles (Figure 1). If the battle position covers a mounted avenue of approach, the BFVs are positioned to cover the approach with fire. The dismounted infantry elements are placed so that they can cover any deadspace that might allow the enemy to infiltrate, or they are dug in around the vehicles for security.

If the battle position covers a dismounted avenue of approach, the infantry is positioned to cover that avenue and the BFVs are dug in (when possible) and used to supplement the defensive fires. This is not necessarily the ideal way to use a BFV, but it may be the only way if a unit is directed to defend a piece of restricted terrain.

In either case, the dismounted infantry elements are used to emplace obstacles and conduct reconnaissance and surveillance operations, including establishing observation posts, patrolling, and conducting counter-reconnaissance missions.

The second option — same battle position, different avenues



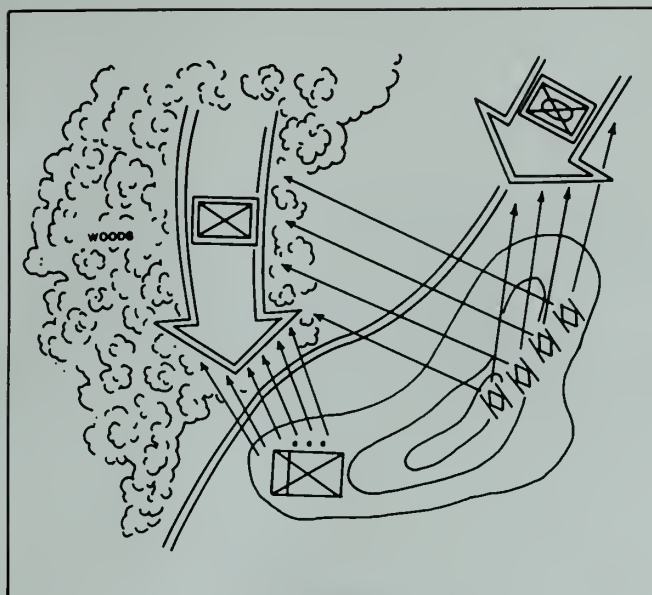


Figure 2. Same battle position, different avenues of approach.

of approach — is made possible by the two distinct elements into which Bradley-equipped infantry units can separate: dismounted elements and fighting vehicles (Figure 2).

In these situations, the dismounted elements occupy areas within the battle positions that offer the best cover and concealment and fields of fire to block the dismounted avenue of approach to the position. In the meantime, the BFVs cover a different, normally mounted avenue of approach, but they must be able to move rapidly to supplementary positions to provide supporting fires to the dismounted element.

In some defensive situations, a battle position will not have the type of terrain that allows the two elements an opportunity to use their distinct weapon systems to the fullest. However, the speed, agility, and long-range fires of the BFV allow the unit the third option — to cover the same avenue of approach as the dismounted elements but from a different location (Figure 3). Thus, a platoon leader may be directed to employ his BFVs on a battle position different from that of his dis-

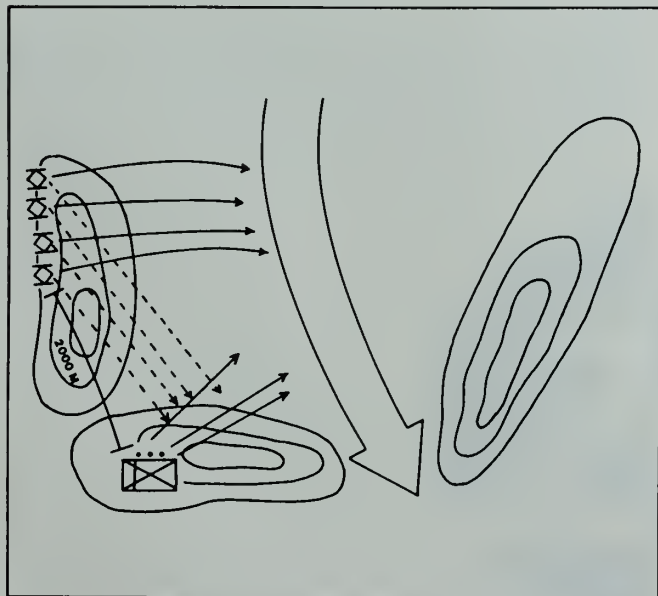


Figure 3. Different battle positions, same avenue of approach.

mounted infantry. This means that the dismounted infantry and BFVs fight separated but in relation to one another.

Fighting in relation to one another simply means that the BFVs can give supporting fires to the dismounted elements from their primary or supplementary positions and that both elements are positioned to engage the enemy forces on the same avenue of approach but at different ranges. A maximum distance of separation of 2,000 meters allows the fires of the 25mm gun on the Bradley to reach and overlap the positions occupied by the dismounted teams.

A platoon leader may choose to locate with either element but will probably most often be with the BFVs. This will permit him to directly supervise their employment and to make sure they shift their fires to cover the dismounted infantry at the appropriate time.

As for the fourth option — consolidation at company team level — in certain situations, the vehicles and the dismounted elements may not be able to fight in relation to each other. Accordingly, the team commander may consolidate his dismounted elements in one location under the control of his ex-

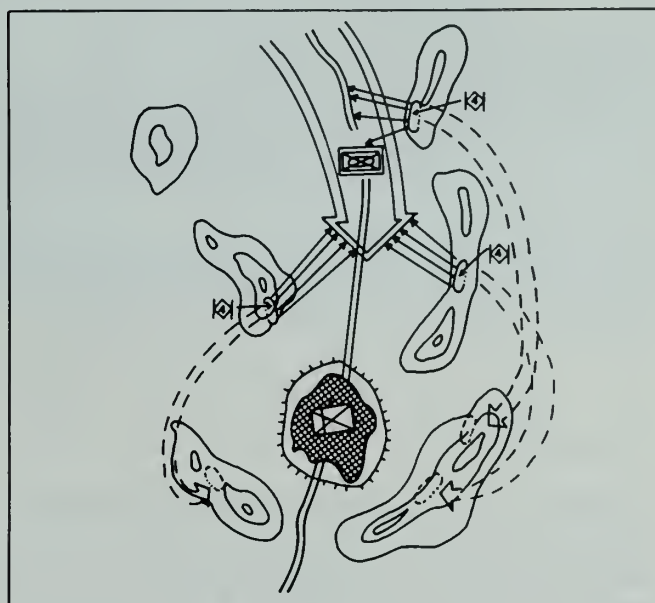
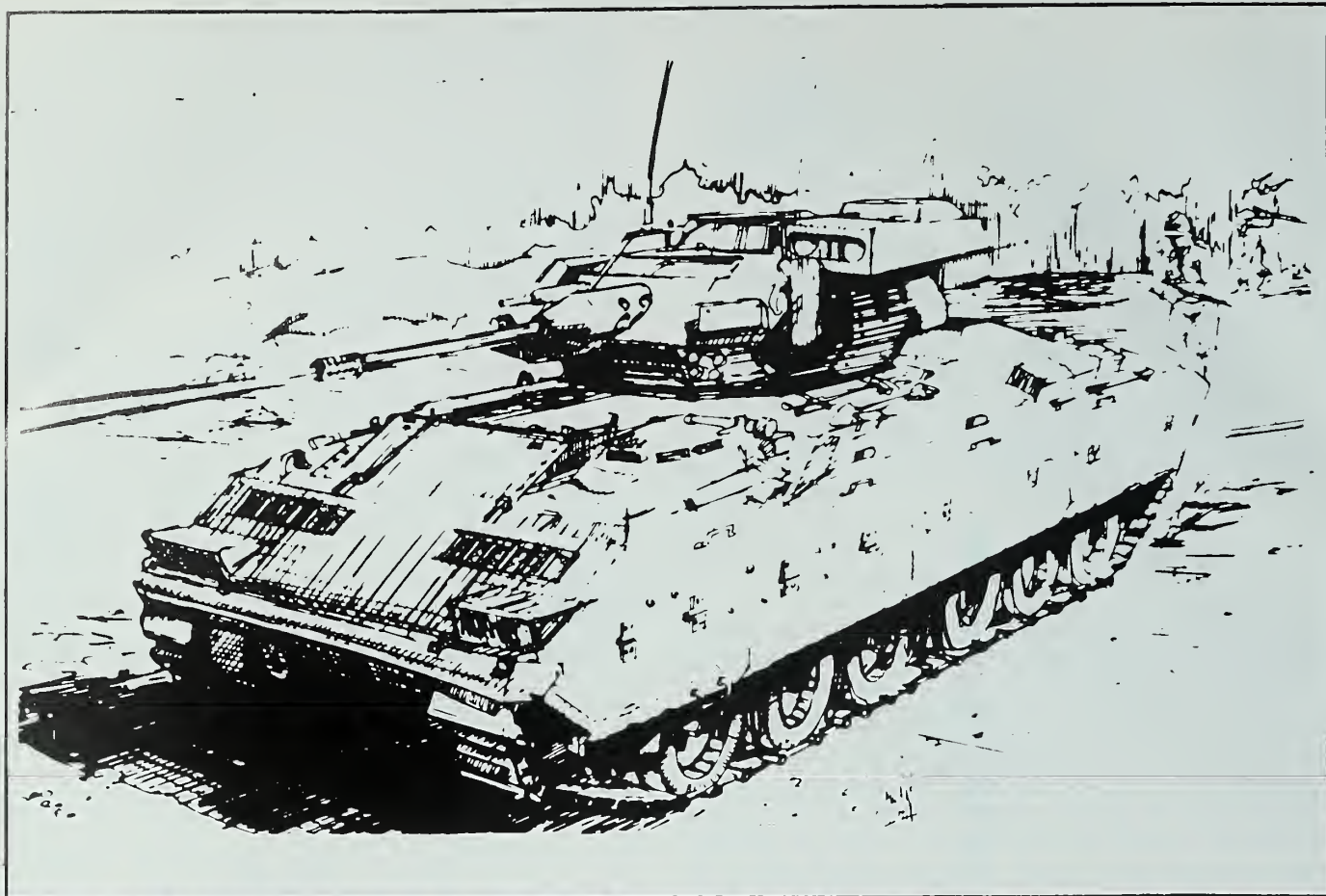


Figure 4. Company team defense option.

ecutive officer, while he assumes control of the BFVs in a separate location. This could occur, for example, when a large number of dismounted troops are required to hold a position such as a strongpoint; or when the primary position for the dismounted elements does not give the BFVs adequate fields of fire; or when the dismounted elements have to occupy heavily wooded or rugged terrain that the BFVs cannot traverse; or when both a mounted and a dismounted avenue of approach have to be defended from the same battle position (Figure 4).

But even when a company's dismounted infantry elements are consolidated, the dismounted infantry and the BFVs may not be able to support each other initially. Plans should then be made to take advantage of the speed of the vehicles to reposition them as soon as possible to support the dismounted infantry.

In addition, during periods of limited visibility, a company team commander may modify his plans to provide additional



security for his fighting vehicle elements. He can do this by moving a rifle team to each fighting vehicle element's position or by consolidating the platoons on a single battle position.

## SUMMARY

Modern maneuver warfare places a premium on quick-thinking leadership, aggressively executed tactics, and fast and powerful equipment. Equipment alone, however, will not bring us victory on the battlefield. Our soldiers must be well trained in tactics and gunnery; our officers and NCOs must be well trained in those leadership skills that allow an idea to be transformed into a plan and that plan to be professionally executed.

Above all, maneuver warfare for mechanized units means understanding how to operate with other elements of the combined arms team. In the end, it will be this combined team rather than its individual components that will win on the battlefield.

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# COMMAND AND CONTROL

LIEUTENANT COLONEL JOEL E. WILLIAMSON

Along with the recently introduced AirLand Battle doctrine, the arrival of the Bradley fighting vehicle and the Abrams tank, with their improved firepower and mobility, have spearheaded a resurgence of maneuver warfare in the United States Army. But these new systems in the Bradley and Abrams battalions can defeat a mechanized enemy threat only if we have a timely and aggressive system of command and control at all levels from battalion down to squad. The one element that coordinates the command and control effort in the battalion, besides providing the built-in organizational flexibility that is so necessary to counter any enemy on the battlefield, is the tactical operations center (TOC).

Although the TOC organization in the J-series battalions is essentially the same as that of the old H-series organization, the command and control requirements have increased. While our doctrine is catching up (the revised FM 71-2 will be published next year), the National Training Center has filled the void by providing a proving ground on which J-series battalions can completely exercise their operational systems.

The guidelines I offer here concerning the operational

aspects of a command group and a TOC are based upon my experience with one Bradley battalion during unit training at home station and during a rotation at the National Training Center (NTC).

In actuality, the TOC is just one of three command and control facilities that a heavy task force uses, the other two being the tactical command post (TAC CP), which fights the battle, and the administrative logistics operations center (ALOC), which supports the battle.

The command group in the TAC CP usually consists of the battalion commander and the staff members he feels he needs to help him fight the battle. In my battalion's case, these were usually the fire support officer (FSO), the air liaison officer (ALO), and sometimes the S-2, depending upon the mission. All three rode in the battalion commander's Bradley, which was equipped with four AN/VRC-46 radios.

The ALO rode in the Bradley because his usual vehicle — a jeep — was too vulnerable to enemy fire and it could not keep up with the tracks during cross-country movement. In the Bradley, the ALO used his back-up UHF/VHF man-pack

ASSEMBLY → LO LD → PL RED PL RED → PL BLUE PL BLUE → TUNA				
ARTY PRIORITY OF FIRES	SCTS	TMA	O	D, TMC
4.2 PRIORITY OF FIRES	SCTS			
4.2 LOCATIONS	GRID	NEW GRID	NEW GRID	NEW GRID
CAS		GRID LOC OF TGT	GRID LOC OF TGT	GRID LOC OF TGT
PREPS				10 MIN ON DBJ TUNA
PRIORITY TGTS		1. GRID	1. GRID 2. GRID	

Figure 1. Fire Support Plan Matrix.

radio for communications. His jeep with its mounted radio was left with the TOC as a back-up system for controlling close air support (CAS).

The FSO often occupied the gunner's seat in the turret. This is consistent with the doctrine laid out in FM 71-2J and FC 21-26, but it is far from an ideal solution. When the FSO and the battalion commander are co-located, they can most efficiently coordinate the battalion fires, but they can only partially control the execution of the fires. This is so because the company fire support teams (FISTs) and forward observers (FOs) send their calls for fire digitally, using the DMD, straight to the supporting artillery battalion, bypassing the battalion fire support element (FSE). The calls are handled on a first-come, first-served basis. The fire support element at the TOC gets feedback through messages on his variable format message entry device (VFMED) from the supporting artillery battalion's fire direction center (FDC) but only after the messages have been processed by the FDC. Thus, unless the company FISTs and FOs use the voice back-up system, both the FSO and the battalion commander have trouble staying abreast of the indirect fire battle.

The use of a fire support matrix that lays out the battalion commander's scheme of fires is an effective technique for solving this problem. (This is currently being taught as a doctrinal technique at the Artillery School.) Figure 1 is an example of an offensive fire support plan matrix developed jointly by the FSO, the S-3, and the TF commander. Not only does it establish who has priority of fire during each phase, it also integrates CAS and priorities of movement for the 4.2-inch mortar platoon. Defensive fires can be planned in the same manner. The use of such a matrix also reinforces the doctrinal concept that calls for the centralized planning of fires and their decentralized execution.

With the advent of the FIST DMD in 1987, this problem should be rectified, because this device will enable the FSO to monitor and selectively override all task force FIST DMD transmissions. The important point, though, is that a battalion commander and his FSO must work closely before and during a battle to ensure timely and accurate fire support.

One of my previous battalion commanders also included the S-2 as a member of the TAC CP on some missions when he felt that early accurate intelligence from the scouts and ground support radars were a key to the success of the mission. This occurred most often in the defense and movements to contact. The S-2 rode in the back of the TF commander's vehicle and monitored the net over which the scout platoon leader passed periodic situation reports. The S-2 then relayed key critical information to the TF commander over the intercom.

This technique provides critical information to the commander much sooner than the TOC can by relaying reports. It also strengthens the command and control process, because together the TF commander and the S-2 can analyze enemy actions as they are reported.

The other key member of the command group who is usually a member of the TAC CP is the S-3, but an alternative is for the TF commander to use the split command concept. This means that instead of locating the S-3 in the TAC CP, the commander positions him elsewhere to command and control another critical sector or zone of the battle. This is a grey area in our doctrine on which little has been written. (One of my previous TF commanders chose to use a split command during all missions at the NTC.)

The effectiveness of this technique is dependent upon the relationship between the TF commander and the S-3. The commander must feel that he can trust the abilities and the tactical judgement of his S-3, and he must be able to communicate his intent clearly to the S-3. Additionally, subordinate commanders must understand the concept and readily accept guidance from either the S-3 or the TF commander.

The split command concept is especially effective in a Bradley battalion, with its increase in the span of control from three to five maneuver units. It allows the commander to go to the focal point of the battle while the S-3 is at the second most critical point. With this increased view of the battlefield, decisions can be made faster and can thus be more timely.

One drawback to this technique is that, in the heat of battle, decisions made by one member of the split command on the ground may never be communicated to the other. But that is

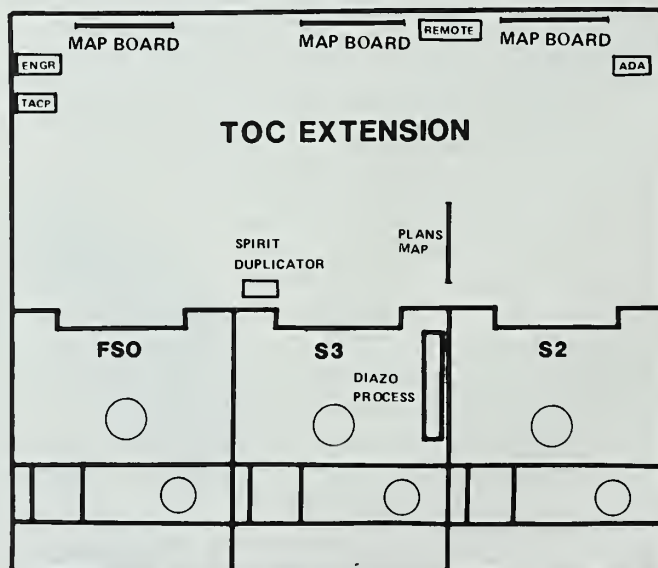


Figure 2. TOC Layout.



why trust and the commander's intent are so important. If the intent is properly understood, these breaks in the communication should not be critical. (This technique is an ideal complement to mission type orders. It is not for everyone, however.)

Another command and control consideration for the task force is the choice of an alternate TOC, which could be the ALOC, the mortar platoon, or the antitank company. The ALOC is the obvious choice. Unlike the other two elements, the ALOC already has the key job of sustaining the task force and has communications established with all of the TF maneuver units to coordinate administrative and logistic matters. By the very nature of its function, the ALOC stays abreast of the combat power of the battalion, monitors the battalion command net, and maintains an up-to-date situation map. Neither of the other two elements does any of these things (except that the AT company commander does monitor the battalion command net, although his company CP does not). Finally, the ALOC is adept at coordinating with higher headquarters and with the task force's subordinate units. (The AT company and the mortar platoon are fighters, not coordinators.) For all of these reasons, the ALOC can go from its sustainment role to that of battlefield manager more swiftly than either the mortar platoon or the AT company.

## TOC ORGANIZATION

The TOC is responsible for actual battlefield management, including collecting information, reporting it, and planning and coordinating the operations.

As in the old H-series TOC organization, the J-series TOC is composed of the S-2 section, the S-3 section, the fire support element (FSE), part of the tactical air control party (TACP), and some members of the communications platoon. At times, engineer and air defense representatives will also be present in the TOC.

The main vehicles in the TOC, besides four or five jeeps, are the three M577s belonging to the S-2 section, the S-3 section, and the FSE. A good TOC crew will know and use several different configurations of these M577s, but there is one configuration that best facilitates planning and information flow within the TOC — a side-by-side arrangement as shown in Figure 2.

This configuration provides several advantages over the others, including the standard one shown in FM 71-2J. First, it offers a much larger work area for producing operation orders and conducting briefings. It also increases the survivability of the S-3's M577, sandwiched as it is between the other two vehicles. But most important, this arrangement eases the information flow between the sections.

With the map boards side-by-side, information can be exchanged rapidly between the FSE, the S-3, and the S-2. This information flow can be improved further if the size of the map boards is standardized so that each element uses the same size overlays. This can be done by having the local training aids center build three boards to TF specifications (Figure 3). Each of these boards is covered with plexiglass that can be

removed easily. The boards are protected during movement by the two outside flaps, which fold in. When open, these two flaps contain critical combat information. (Annex G in FC 21-26 has some excellent formats for this type of information.) Overlays are cut to fit the plexiglass, and the bolts to hold the overlays are identically spaced on all the boards so that the S-2 and the FSO can quickly place their overlays on the operations map for coordination.

The keys to effective TOC operations are a detailed TOC SOP and a TOC training plan. A TOC SOP should detail the duties and responsibilities of TOC personnel. This is especially important with the high turnover that many units experience. An SOP may also include, among other things, set-up and tear-down procedures, displacement procedures, eating and sleeping plans, shift guidelines, physical security plans, priorities of work, cross-loading plans and checklists, inspection checklists, vehicle parking lists, and checklists for the officer and NCO in charge. The SOP should be a living document that is used and then changed when improved procedures or techniques are adopted.

The SOP is actually the task force's institutional memory for TOC operations so that when a new S-3 or operations sergeant walks in the door he is not faced with starting from scratch, as is so often the case.

Once the key procedures have been captured on paper, they must be practiced until they become mechanical, and that's where a training plan comes in.

All too often, TOC personnel practice their procedures only when their battalion rolls out the gates of the motor pool to begin a field training exercise (FTX). The TOC may have been in the field once in the previous four to six weeks, perhaps to support a gunnery exercise where the S-3's M577 was used on one range and the S-2's M577 on another. Also during this period the S-3 section probably lost two or three soldiers to normal rotations and gained a like number.

Because of this lack of practice and this turnover of personnel, the TOC usually must spend the first couple of days of an exercise shaking out the cobwebs and retraining itself on displacement procedures. The staff must reestablish priorities of work and produce operation orders. Near the end of the FTX, the TOC will be fairly productive but still won't be running smoothly. The net result is that the companies usually end up acting as training aids for the battalion staff, while the staff struggles to get its act together. When the operations section returns to garrison, day-to-day operations will again consume its time, and TOC operations will revert to their usual low training priority.

It is a real challenge to overcome this garrison-to-field pendulum swing. A first step is to realize that the staff needs a training plan to follow just as much as the maneuver units and that it is a waste of training time and money to take an entire battalion to the field just to train the battalion staff.

The soon-to-be-published ARTEP Mission Training Plan (AMTP) 71-2 (Coordinating Draft) discusses this very issue. It presents a logical methodology for a TF to use in developing staff training plans that parallel and complement the battalion training plan.

Staff training can be conducted using a series of low-cost

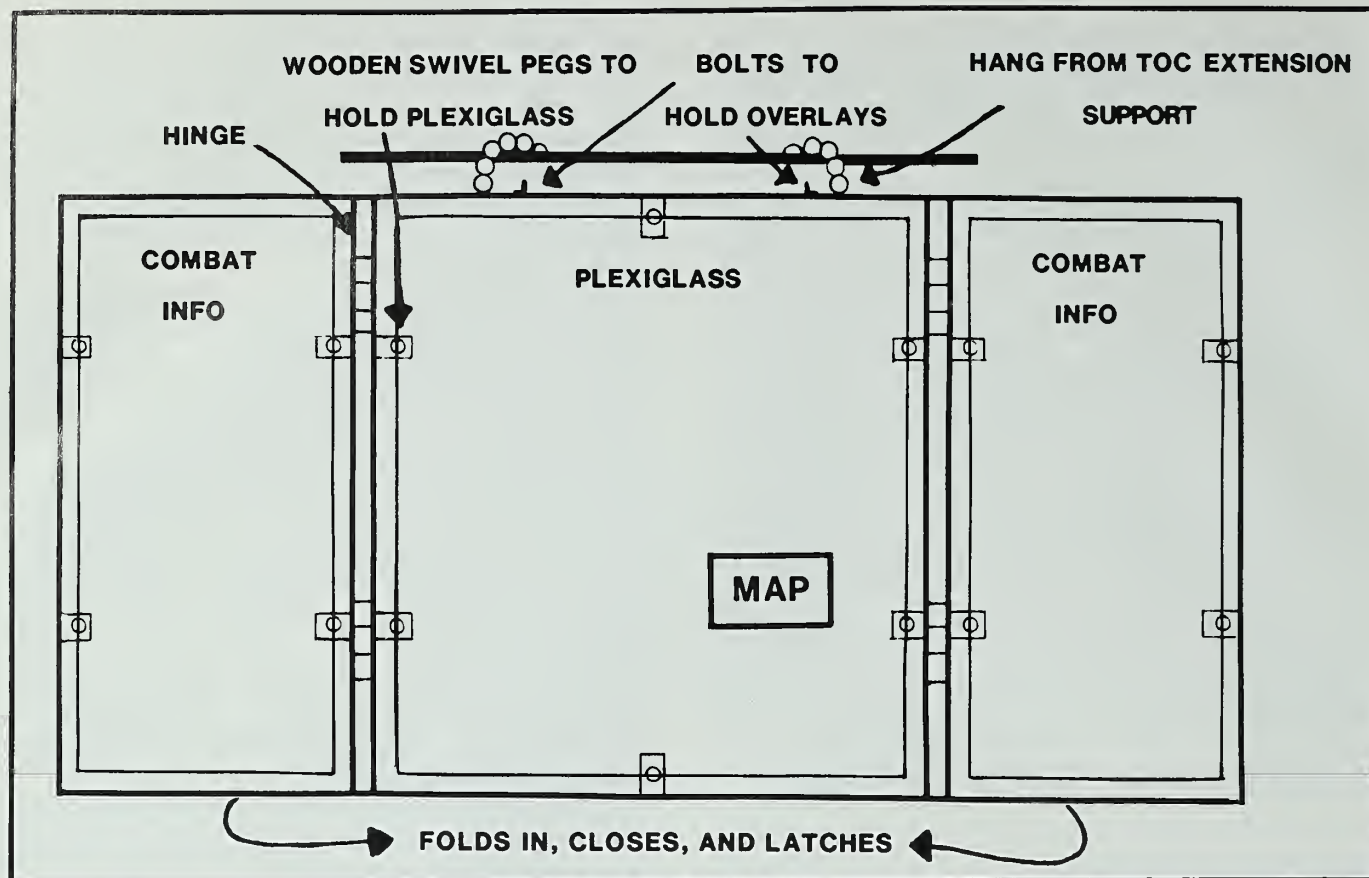


Figure 3. TOC Map Board.

training exercises (map and command post exercises and simulations) in garrison and close-in training areas. The idea is to move from low-cost training exercises to high-cost exercises without wasting time or manpower. Because the staff and the units in the task force are following parallel training programs, both will become gradually more proficient so that they will get the greatest possible benefit from a full-blown FTX.

Another part of TOC operations that gives rise to emotional debate in some units is the TF executive officer's role as second in command (2IC). Our doctrine clearly defines that role and states that during the battle he is "normally" located in the TOC. (Having been in a battalion where the XO was strictly involved in coordinating the combat service support, and then having evaluated a task force on an ARTEP in which the XO as 2IC ran the TOC during the battle, there is no doubt in my mind that the doctrine is correct.) Combat support and service support activities should not suffer while the XO is in the TOC, since he has radio and wire contact with the ALOC.

The TOC provides the best vantage point from which the XO can take over should the TF commander become a casualty. Even though the XO at that point will no doubt be well-versed on the tactical situation, the command and control of the units in contact should pass first to the S-3, who is in the best position to continue the battle. Command should pass to the XO only when he is in a position on the battlefield that allows him to see the fight and effectively control it.

Another key aspect of TOC operations is the TOC's physical

security plan. Two approaches can be taken, neither of which is totally satisfactory.

The first approach is to augment the TOC by taking a squad from one of the line units. This is only partially satisfactory as it provides a six-man squad, but the squad does come with a Bradley that can be used to cover the main mounted avenue of approach into the TOC's area of operations when the S-3 and the TF commander are forward. The main problem with this approach is that it takes away riflemen from a maneuver element that is already short of them.

The alternative is to use personnel from the TOC, along with the soldiers who work in the CP area. The problem here is that there are just not enough soldiers to man an adequate defensive perimeter. In addition, the TOC NCO in charge must closely coordinate his soldiers' schedules to make sure they all get at least three or four hours of sleep.

Regardless of this fact, for the defense of the TOC to succeed, the principal mounted and dismounted avenues of approach must be identified and covered. Dismounted avenues should be covered by soldiers from the TOC. Positions should be designated for the TF commander's and the S-3's Bradleys when they are in the TOC area. These positions should cover the high-speed avenues of approach into the TOC area.

A readily identifiable audio signal such as an air horn should be used to signal an enemy attack. At the sound of the alarm, everyone in the TOC, except for the minimum number required to operate the radios, should move to prepared fighting positions. (This procedure must be rehearsed in both daylight and darkness at each new TOC location.)



A good way to brief everyone in the TOC on the defensive plan is to use a blank acetate-covered board on which the defensive positions can be sketched. Other features that should be added include the sleeping, eating, parking, latrine, and dismount areas.

The key to the successful defense of the TOC is the coordination between the headquarters company's first sergeant or XO, who is responsible for selecting the defensive positions, and the operations sergeant, who is responsible for scheduling soldiers to man them. Both tasks should be completed and all TOC personnel briefed on them within two hours after the TOC arrives in a new location. Then someone in the TOC organization needs to be specifically charged with seeing that the positions are properly sited and dug and that the defensive plan is followed.

Another challenge in the field is to produce orders and overlays in a timely manner and in sufficient quantities that all the members of the TF who have a need to know get the information. The methods I have seen used for this range from jelly roll devices to reproduction machines to field facsimiles to spirit duplicators to mimeograph machines to plain old elbow grease and carbon paper. My preference is a manual spirit duplicator used with an operation order format pre-printed on spirit-duplicator stencils. TOC officers write the order on the pre-printed forms and then reproduce the order and its annexes on the spirit duplicator.

A spirit duplicator is much faster than a field facsimile or reproduction machine, and it doesn't rely on electric current as the others do. It is much cleaner to use than a mimeograph machine and requires less upkeep. The stencils are also much easier to write on.

Overlays are another story. Jelly rolls are hard to come by, and they make only a few copies per roll (about ten). The only other technique is to have a crew in the TOC copy the needed quantity off of a master copy, but quality control is a constant problem, and accuracy also suffers.

Recently, I saw a task force reproduce clear acetate overlays using a photographic process called diazo. The reproduction set (Diazo Process NSN 3610-01-123-7782) can be ordered through the supply system. The only problem is that the film is expensive, hard to get, and often must be locally purchased. Nevertheless, for units that can afford it, this seems to be a good solution to the problem of reproducing overlays.

Command and control and the role of the TOC and the command group in this process have not changed greatly as the Army has moved from H-series to J-series organizations. The command group must still fight the battle, and the TOC must ensure that battlefield management is being accomplished—that orders are being followed; that the plan is working; and that the information flow is maintained. The roles of some staff members have been redefined, most notably that of the battalion executive officer and, to a lesser degree, that of the battalion S-3. Still, the doctrine laid out in FM 71-2J and FC 21-26 provides a solid framework for fighting and winning on future battlefields.

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# RIFLE COMPANY

## ECCM

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The term "electronic counter-countermeasure" (ECCM) may conjure up images of super-sophisticated underground listening posts full of incomprehensible equipment, or perhaps aircraft electronically zapping enemy communications, radars, or missile guidance systems. Few people would think of ECCM in terms of laying communication wire or using runners in order to maintain radio silence. Nevertheless, both the electronic warfare (EW) wizards in their listening posts or planes and the rifle company soldiers laying wire are using ECCM techniques.

Convincing the riflemen that their efforts are important and effective, though, is another matter. For one thing, during most of their tactical training periods, their company's ECCM efforts may seem inconsequential because there is little or no tangible feedback from them. They also have difficulty understanding that most of their company's ECCM efforts are defensive in nature rather than offensive, that rather than being used to hack off an enemy's electronic warfare (EW) arm, they will be used more like a shield to blunt an enemy's EW sword thrust. That shield must remain raised at all times; if it is dropped, even for a second, the sword will strike home.

How, then, does a company hold onto its ECCM shield and use it to best advantage? Before that question can be answered, some definitions and explanations are in order.

Electronic warfare (EW) is officially subdivided into three general categories:

- Electronic support measures (ESMs)—direction finding and monitoring — are used to locate the geographic position of an enemy and to listen to his electronic signals.
- Electronic countermeasures (ECMs)—jamming and deception—are used to nullify an opponent's electronic equipment.
- Electronic counter-countermeasures (ECCMs)—protecting, evading, concealing, and covering—are used to negate an opponent's ECM attack on friendly electronics or to defeat his ESMs.

All three of these subcategories of EW are applied across the three radio frequency bands that a rifle company uses — high frequency (HF), very high frequency (VHF), and ultra



high frequency (UHF). In each of these bands, radio waves behave differently. This is especially true concerning ground waves, which travel through the air close to the ground, and skywaves, which travel to the upper atmosphere, bounce off the ionosphere, and come back down to the ground. This means that ECCM rules that work in one band will not necessarily work in another.

Specifically, the HF band uses both skywave and ground-wave communication. The skywave signal can give much greater range for communications and is the only way short of having a satellite that an individual radio can communicate over the horizon. But the atmosphere introduces rapidly changing variables that can affect the quality of skywave communications. For example, both time of day and atmospheric refractivity can affect how well communications perform.

Fortunately, there are some indicators that will help a radio operator decide whether he can use skywave communications. These indicators are the maximum usable frequency (MUF) and the lowest usable frequency (LUF), which can be computed daily by the battalion communications officer or the communications chief. These readings tell an HF radio operator whether his assigned frequency falls within the bracket of usable skywave frequencies. (One of the reasons for this bracket of frequencies is that the higher the frequency is, the less likely the waves are to bounce off the ionosphere and return to earth.)

In the VHF and UHF portions of the spectrum, there are



no skywave communications to speak of. The radio waves that are pointed toward the ionosphere pierce right through it and keep going out into space. The only way to get over-the-horizon communications with an individual VHF or UHF radio is to have a relay station such as a satellite or an aircraft. Otherwise, VHF and UHF signals must follow a groundwave path, which, for these frequencies, is commonly called line of sight (LOS) communications. Normally, if a radio operator can't see the point he wants to communicate with — if a mountain is in the way, for example — he can't communicate. The primary difference between VHF and UHF groundwaves is the number of obstacles in the line of sight that the waves can penetrate. For instance, heavy forests interfere more with UHF groundwave signals than they do with VHF groundwave signals.

Regardless of which type of groundwave signal is used, an important concept to understand is how to point the radio waves in the proper direction. To do this, quite simply, the radio operator uses his antennas.

For purposes of this article, there are two kinds of antennas — omnidirectional and directional. With an omnidirectional antenna, the radio waves travel outward 360 degrees in all directions just as the light from a table lamp travels out in all directions. Conversely, a directional antenna is pointed toward the desired direction of communication, just as a flashlight is focused in a single direction.

The directions in which antenna radio waves travel are generally known as field patterns. When a field pattern becomes focused, the beam of radio waves is referred to as a "lobe" (Figure 1). The areas where there are no radio beams are called "nulls." The width of a lobe (in degrees) and the direction in which it is pointed are determined by the type of antenna used. At company level, directional antennas are usually of the field expedient kind, because the antennas issued with company radios are predominantly omnidirectional.

On the assumption that a company commander, in terms of tactical communications, is interested primarily in shielding his voice radios, some ECCM techniques have been consolidated and boiled down to three checklists, which are included here. The techniques shown apply only to three specific radios: the AN/PRC-104, which handles the HF band (Table 1); the AN/PRC-77, which handles the VHF band (Table 2); and the AN/PRC-75, which handles the UHF band (Table 3). If these three radios can be shielded from an enemy's

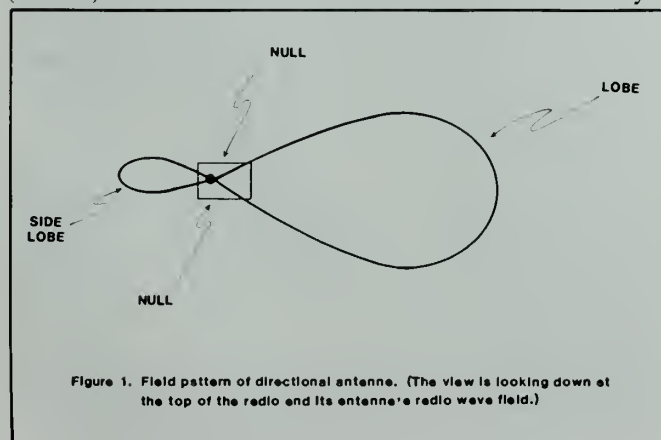


Figure 1. Field pattern of directional antenna. (The view is looking down at the top of the radio and its antenna's radio wave field.)

EW capabilities, then the company's major fire support nets and command and control nets can be maintained.

To use these tables, a radio operator follows a three-step process:

- He finds out from the S-2 what combination of EW capabilities the enemy has.
- He determines whether his company is conducting offensive operations (taking objectives) or defensive operations (digging in).
- He looks at the table under the appropriate enemy EW capability and then under the appropriate column — offense or defense. Everywhere there is an "X" in this column, he uses the ECCM technique shown on the far left of the table. If the enemy has more than one of these EW capabilities, the radio operator uses every technique that has an X marked beside it, even if it is marked in only one of the multiple EW capability columns that apply to his situation.

An operator's ECCM actions, as shown in the tables, are divided into two general classifications. The first classification I call "methods ECCMs" — techniques an operator can use to minimize enemy ESMs and ECMs relying only on the equipment available with the standard radios. Methods ECCMs are the operator's actions that do not involve the use of additional hardware. The second classification, which I call "hardware ECCMs," are actions that do involve the construction or introduction of additional hardware elements.

Under these two broad classifications, the four basic EW capabilities — monitoring, direction finding, deception, jamming — can be analyzed and possible tactics can be formulated for each classification of company level ECCM actions.

## Monitoring

First, in order to understand how an enemy monitors our radios, let's review the geometry of a general tactical situation and begin to make some distinctions as to how that geometry changes during fluid wartime operations. Referring to Figure 2, our radios will be located primarily along the forward edge of the battle area (FEBA) with the rifle companies. One to two kilometers behind these front lines will be the battalion command post (CP). The enemy's ability to monitor is located on the opposite side of the FEBA from friendly units within relatively short range.

The Soviets, for example, have a large number of radios that can intercept our signals, with many of these available to their front line combat forces and not just to their specialized EW units. Consequently, monitoring should always be considered a threat, even when friendly intelligence sources report no specialized enemy EW unit in the area.

In both offensive and defensive operations, the distances between front line and battalion CP radio links remain relatively the same. As a result, the primary emphasis is on groundwave rather than skywave propagation, since the distances involved are normally less than 25 kilometers. There are some clear distinctions, however, between these two types of operations. These distinctions can be summarized in the word "mobility." Company level radios have only one type of

antenna for an operator on the move — the whip antenna, which is omnidirectional and limited to groundwave propagation. In addition, offensive mobility affects communications in that it reduces the number of alternate methods of communication available to the company, such as wire-linked field phones. This results in additional reliance on the radios as the essential communication link. Throughout both offensive and defensive operations, then, the ECCM objective is to avoid being listened to by the enemy.

To ensure a distinct understanding of when to apply specific techniques of “methods ECCM” and when not to, the appropriate tactics must be defined separately for offensive and defensive operations.

Since in offensive operations no rapidly responsive alternate means of communication is available to the company, it must rely on its radios as its primary means of communicating with its platoons, its supporting arms, and the battalion CP. Since the company *must* talk by radio, it really has only four ECCM techniques with which to counter monitoring:

**Brevity codes.** The battalion S-3 can pre-establish codes to indicate accomplished tasks or standard phrases. The extent to which these codes are used is left to the individual units involved, but too many can become confusing and counter-productive.

**Short-burst transmissions.** This technique consists of limiting transmissions to three seconds or less, which makes it more difficult for the enemy to identify and monitor a friendly frequency. But operators must not fall victim to the common misinterpretation that they can carry on a conversation using a series of 50 or 60 three-second bursts. This is not good ECCM, because the enemy will find the frequency. The three-second burst is most useful when used in conjunction with a brevity code.

**Alternate frequencies.** At randomly prescribed times during the day, or when there is some indication of enemy monitoring activity, the operator can temporarily frustrate that

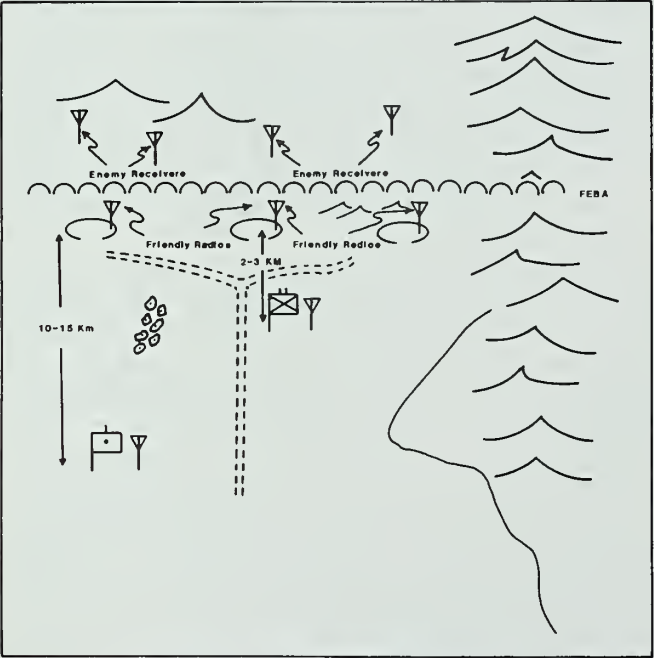


Figure 2. General Tactical Situation.

ENEMY EW CAPABILITIES								
Overall Company Ops.	Monitoring		Direction Finding		Deception		Jamming	
	OFF	DEF	OFF	DEF	OFF	DEF	OFF	DEF
ECCM Technique								
METHODS ECCM								
Brevity Codes	X	X	X	X	X	X	X	X
Short Burst Transmissions	X	X	X	X	X	X	X	X
Alternate Frequencies	X	X	X	X	X	X	X	X
Higher than MUF	X	X	X	X	X	X	X	X
Authentication Codes					X	X		
Alternate means of Communication		X		X		X		X
Terrain Masking		X		X		X		X
HARDWARE ECCM								
Secure Voice	X	X			X	X		
Directional Antennas		X		X		X		X
Horizontal Antennas								X

Table 1. AN/PRC-104 (HF) ECCM Techniques.

activity by changing frequencies. This technique is essentially a crude method of manual frequency hopping. It should be noted, however, that extensive prior coordination is required among all members of any radio net using this technique to ensure a smooth changeover in frequencies.

**Higher-than-MUF frequencies.** This technique applies only to HF communications in general and to the AN/PRC-104 in particular. It limits monitoring by enemy receivers that rely on skywave propagation. By using a ground-wave antenna and by operating on frequencies that are higher than the maximum usable frequency for skywave propagation, the AN/PRC-104 operator can effectively keep the entire skywave class of enemy receivers from monitoring his transmissions. To use this technique, the AN/PRC-104 must be within groundwave range of the opposite end of the radio link.

It is appropriate here to clear up a common misinterpretation of when to use ECCM during offensive operations.

Specifically, many inexperienced radio operators fail to realize that the need for radio silence or reduced radio communications at the outset of an operation changes dramatically once enemy contact is made. Before contact, the objective is to hide the company’s frequencies from the enemy. Once engaged, though, the enemy knows where the company is. At that point, radio operators should talk freely and let the company commander, the battalion CP, and the supporting arms know what they need. In short, radios should be used to their maximum advantage at this point so that the enemy can be destroyed before he can react fully.

In defensive operations, the operator has more flexibility in the techniques available for “methods ECCM” than he has in offensive operations. This flexibility stems primarily from the variety of alternate communication means available in the defense. The radio operator can use not only the same four “methods ECCM” used in offensive situations but also the following additional techniques:

**Alternate means of communication.** In the defense the reliability, speed, and number of alternatives to radio wave



transmission increase. The specific methods available to the company in the defense are field phone wire links and courier service. (Both of these are also possible in the offense, of course, but dragging wire in a footmobile offense will prove highly unreliable; and using runners is not nearly as reliable as in the defense. In the defense a courier knows where the company position is and therefore where he is going; in a mobile offense he must hunt around to find a unit that is moving.)

As in other ECCM techniques, there are some common misunderstandings about the use of alternate means of communication within a company. In particular, platoon leaders may interpret a company commander's actions as inconsistent if they (the platoon leaders) are required to maintain radio silence and use couriers or wire while the forward observers from the supporting arms are allowed to use their radios. They should understand, though, that the distances between the forward units and the actual fire support batteries, combined with operational demands, frequently make it impossible for the supporting arms forward observers to use alternate means of communication.

The necessity for the supporting arms to use their radios in no way nullifies the platoons' efforts at radio silence; in fact, this makes these efforts even more critical. For example, an enemy's radio monitors maintain logbooks and chart the company's radio usage. From this, they can determine when the company is likely to change from defensive to offensive operations if its overall radio usage increases dramatically. Consequently, if distance demands that our supporting arms observers use radio links, the platoon links within the company must use alternate means of communication to reduce overall company radio usage.

**Terrain masking.** In a defensive situation, the company has time to put prominent pieces of terrain between itself and the enemy receivers. The company's critical nets (supporting arms and the link to the battalion CP) are trying to talk back from the FEBA to the rear area while the enemy receivers are in the opposite direction on the other side of the FEBA. Mountains or hills between the company's radios and the FEBA, therefore, will not affect the company's communications but

Overall Company Ops	ENEMY EW CAPABILITIES							
	Monitoring		Direction Finding		Deception		Jamming	
	OFF	DEF	OFF	DEF	OFF	DEF	OFF	DEF
ECCM Technique								
METHODS ECCM								
Brevity Codes	x	x	x	x	x	x	x	x
Short-Burst Transmissions	x	x	x	x	x	x	x	x
Alternate Frequencies	x	x	x	x	x	x	x	x
Authentication Codes					x	x		
Alternate Means of Communication		x		x		x		x
Terrain Masking		x		x		x		x
HARDWARE ECCM								
Secure Voice	x	x			x	x		
Directional Antennas		x		x		x		x
Horizontal Antennas								x

Table 2. AN/PRC-77 (VHF) ECCM Techniques.

Overall Company Ops	ENEMY EW CAPABILITIES							
	Monitoring		Direction Finding		Deception		Jamming	
	OFF	DEF	OFF	DEF	OFF	DEF	OFF	DEF
ECCM Technique								
METHODS ECCM								
Brevity Codes	x	x	x	x	x	x	x	x
Short-Burst Transmissions	x	x	x	x	x	x	x	x
Alternate Frequencies	x	x	x	x	x	x	x	x
Authentication Codes					x	x		
Alternate Means of Communication		x		x		x		x
Terrain Masking		x		x		x		x
HARDWARE ECCM								
Directional Antennas		x		x		x		x
Horizontal Antennas								x

Table 3. AN/PRC-75 (UHF) ECCM Techniques.

will hinder an enemy's monitoring capability. It should be noted, though, that the operators cannot remote their antennas any great distances from their radios because of equipment limitations. Consequently, the use of terrain masking may be limited in situations where a terrain feature could diminish the ability of the supporting arms observers to see and control air, mortar, or artillery strikes along the FEBA.

As for "hardware ECCM," both standard issue and field expedient devices can be used to counter monitoring:

**Secure Voice.** In the mobile offense, an operator will have little time to construct field expedient ECCM devices. Therefore, he must rely on standard issue devices. The only real standard issue device available to a radio operator, though, is a secure voice crypto device such as those in the Parkhill and Seville family of equipment, and secure voice devices are presently available only with the AN/PRC-104 and the AN/PRC-77. Secure voice methods do not apply to the AN/PRC-74, but they will with its replacement, the AN/PRC-113. (Within a decade, in fact, all transmissions will be encoded.)

A defensive situation, on the other hand, gives an operator a chance to construct field expedient devices to improve his ECCM capabilities.

What kind of such devices can an operator construct in the field? Since he wants to make it harder for an enemy monitor to pick up his signal, he can reduce his radio wave power output. But how does he reduce the power of the signal reaching the enemy while maintaining or increasing the power of the signal reaching his CP? The answer is directional antennas.

**Directional antennas.** Considering the position of enemy and friendly units with respect to the FEBA (Figure 2), and remembering the omnidirectional field patterns of the standard whip antenna, the operator can achieve his ECCM objective by reducing the lobes of the field patterns pointing in the direction of the enemy while maintaining or increasing the lobes pointing in the direction of the friendly receivers. He can build field expedient directional antennas from material normally at hand in the field, such as communication wire.

It would be ideal if a directional antenna's nulls could be pointed directly at the enemy receivers, but a radio operator will probably not know the enemy's exact locations. Nonethe-

less, he will know their general direction (that is, the opposite side of the FEBA) and can present the enemy receivers with at least the directional antenna's reduced sidelobes if not (with luck) the nulls themselves. (Many publications describe specific directional antennas or precise construction methods.) It should be noted, however, that the use of directional antennas with the AN/PRC-75 would be rare since that radio most often requires omnidirectional patterns to talk to friendly aircraft moving rapidly about the battlefield.

### Direction Finding

Aside from these enemy monitoring ESMs, one that is potentially much more dangerous to a rifle company is direction finding (DF). While the objective of measures taken against monitoring is to deny the enemy the content of the company's transmissions, for direction finding it is to deny him the knowledge that the company is even transmitting.

In practical terms, most of the ECCM techniques that can be used against monitoring can also be used with confidence against direction finding. The secure voice technique is an exception. For direction-finding purposes, secure voice transmissions are just as good to the enemy as transmissions sent in the clear. (ECCM techniques that are applicable in combatting DF are summarized in the DF column of Tables 1, 2, and 3.)

### Imitative Deception

Imitative deception, a type of enemy ECM, requires that the enemy be able to do two things: monitor us on our frequencies and employ a skilled linguist to deceive our radio operators or to elicit information from them.

Since the enemy's success depends directly on his monitoring capability, all of the previously developed ECCM techniques for use against monitoring also apply in this case, along with an additional technique — authentication.

Authentication codes are pseudo-randomly generated codes an operator can use to verify the authenticity of any suspicious station on his net. The codes are disseminated daily and can be employed even when no suspicious messages have been received, just to make sure a highly skilled linguist is not operating against the unit. (The appropriate techniques to use against imitative deception are summarized in the tables.)

### Jamming

Jamming — the intentional introduction of noise power to a receiver so that the operator cannot understand the signals

transmitted — is, for purposes of this discussion, the most dangerous type of ECM. The point to remember is that this is a reception problem for the radio operator and not a transmission problem.

The ECCM techniques to be used against enemy jamming can be summed up in two steps: First, "methods ECCM" can be used to keep him from knowing our operating frequencies. This means practicing the same techniques used against direction finding. Second, "hardware ECCM" techniques can be used to shield our radios from the jammer's power:

**Directional antennas.** Just as a radio operator can use directional antennas to prevent the enemy from monitoring his transmissions, he can also use directional antennas to reduce or eliminate the jamming power a friendly receiver gets. He does this by pointing the antenna's nulls in the direction of the enemy.

**Horizontal antennas.** He can also use field expedient antennas constructed to be horizontally polarized. Since most Soviet groundwave tactical jammers are vertically polarized, a radio receiver with a horizontally polarized antenna would be largely unaffected by the jamming.

(The principle behind this can be demonstrated with two pairs of polarized sunglasses. If both pairs are put on, one over the other, the sun can be seen through them. But when one pair is removed and rotated 90 degrees with respect to the other, the sun is completely blocked out.)

When we rotate our antennas to a horizontal polarization, we are doing the same thing to the jammer's power that the rotated sunglasses do to the sunlight. Of course, both ends of the friendly radio link must have the same polarization.

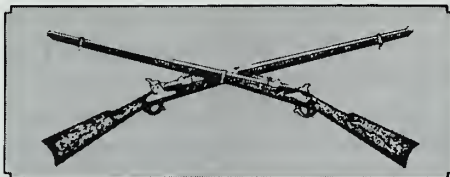
Additionally, horizontal polarization will diminish the groundwave distance that the radio wave can travel, so it cannot be used to great effect when opposite ends of the friendly line are on either end of the horizon. In other words, operators must plan carefully and be selective when using horizontally polarized antennas.

In summary, there are electronic counter-countermeasures that can be effectively used at company level against an enemy's electronic warfare capabilities. All a company commander and his radio operators need to keep their ECCM shield raised is a little knowledge and a lot of confidence. The guidelines offered here can serve as a starting point from which they can build that knowledge and confidence.

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# TRAINING NOTES



## Bradley Gunnery

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Since the fielding of FM 23-1 (Test), Bradley Fighting Vehicle Gunnery, in December 1983, numerous conferences and meetings, formal and informal, have been conducted concerning Bradley gunnery. The result has been a constructive interchange of thoughts and ideas, many of which have been incorporated into a new FM 23-1, which is planned for distribution in March 1986.

Thanks largely to field experience and the lessons learned from it, and to a close working relationship between the Infantry School and the cavalry trainers at Fort Knox, this greatly improved gunnery manual reflects the evolving development of the Army's Bradley force.

Like other gunnery programs, Bradley gunnery is designed to train soldiers to combat proficiency and to maintain that proficiency, which is evaluated through skills testing and a series of standardized live fire tables. The training tasks for each of the 12 gunnery tables reinforce skills in a progressive sequence.

The tables can be grouped into two major components: subcaliber and full caliber gunnery (see chart).

Tables I-IV are designed for use on scaled ranges, with minimum cost in ammunition and range overhead. (The more common training devices available are the Brewster and Bradley subcaliber devices.)

These tables reinforce the basic gun-

nery skills that the crew of the Bradley must master before they can qualify. These first four tables, because they can provide an excellent opportunity for turret cross training within the Bradley squad, should be fired as often as possible.

Table V is fired on a full-scale range at one-half scale targets using the Bradley's coaxially mounted 7.62mm machinegun. This is the first table in which crew training occurs on a moving

Bradley. A crew's teamwork — developed during preliminary gunnery training and firing the previous subcaliber tables — is refined as the crew engages stationary and moving targets deployed in tactical arrays.

The full caliber tables, VI-XII, consist of exercises involving stationary and moving Bradleys firing at stationary and moving, single and multiple target arrays. They are conducted during daylight hours and at night.

### BFV GUNNERY TABLES

#### SUBCALIBER

- |     |   |
|-----|---|
| I   | Zero/manipulation/range card.                 |
| II  | Stationary Bradley—stationary/moving targets. |
| III | Stationary Bradley—adjustment of fire.        |
| IV  | Stationary Bradley—stationary/moving tables.  |
| V   | Vehicle team subcaliber table.                |

#### FULL CALIBER

- |           |   |
|-----------|---|
| VI-A&B*   | Vehicle team baseline table.                              |
| VII-A&B*  | Vehicle team combat table.                                |
| VIII-A&B* | Vehicle team qualification table.                         |
| VIII-C    | Rifle team qualification exercise.                        |
| VIII-D    | Infantry squad qualification exercise.                    |
| IX-A&B*   | Scout section combat table.                               |
| X-A&B*    | Scout section qualification table.                        |
| XI-A&B*   | Infantry platoon mounted table.                           |
| XII-A&B*  | Infantry platoon mounted qualification.                   |
| XII-C     | Infantry platoon dismount element qualification exercise. |
| XII-D     | Infantry platoon qualification exercise.                  |

\*A = Day table, B = Night table.

Table VI is the first one that requires a crew to fire the vehicle's 25mm automatic gun and the 7.62mm coaxial machinegun. The table is fired with the vehicle in a stationary position, which permits trainers to coach and instruct a crew on the conduct of full caliber fire.

Tables VII and VIII require Bradley crews to engage realistic tactical target arrays with all the turret-mounted weapons during both day and night from a stationary position and while moving. Table VII is essentially a practice table for Table VIII, which is the first Bradley gunnery qualification table. In it, Bradley crews are evaluated on crew performance and quick, accurate fire.

Both infantry and cavalry scout crews fire these first eight gunnery tables, because they emphasize turret-related skills that are common to both. Tables IX and X, however, are fired only by cavalry scout sections and Tables XI and XII only by infantry platoons. Table IX is the live-fire practice for Table X, which is the scout sections' qualification table; likewise, Table XI is the practice for qualification Table XII for the infantry platoons. Since both scout section and infantry platoon tables are considered tactical gunnery exercises, the scoring has been expanded to include control of fires, reporting procedures, movement techniques, and command and control.

As a result of a Bradley gunnery conference in May of last year, Bradley gunnery was expanded to include exercises specifically designed for the infantry squad and its rifle team as well as for the infantry platoon and its dismount element. These new exercises have been incorporated into Tables VIII and XII.

Tables VIII-C and XII-C, for the first time, give the dismounted Bradley infantry an opportunity to be tested during gunnery exercises. Both tables can be conducted as either live-fire or MILES evaluations on ranges in local or major training areas, either separate from or in conjunction with crew gunnery.

Table VIII-C, which is conducted from prepared defensive positions during daylight, consists of two exercises that require a rifle team to conduct simultaneous engagements at near and far dismounted infantry and vehicle targets. Table XII-C includes similar but more numerous target opportunities. This table is conducted during a daylight offensive scenario and during both day and night defensive scenarios. Both dismounted tables are scored on accuracy, firing position selection, and fire distribution and control.

Tables VIII-D and XII-D combine all of the Bradley infantry training into a squad and platoon qualification. Table VIII-D consists of three daylight exer-

cises — dismounted engagements, firing-port-weapon engagements, and vehicle crew engagements. Table XII-D also offers both day and night dismounted and mounted target engagements. Each of these tables may be fired on a separate range dedicated to these tasks or fired as part of VIII-A for squad qualification and XII-A and -B for platoon qualification. For further flexibility, units also have the option of shooting these as live-fire or as MILES exercises. The two major scoring standards for squad and platoon qualification include fire distribution and control within the dismounted and mounted elements and fire coordination between these same two elements.

Today's Bradley gunnery program tests the combat readiness of Bradley soldiers and their fighting vehicles through tables that are progressive in nature and through demanding, realistic standards.

Bradley gunnery provides a training challenge to all Bradley infantrymen and cavalymen to train to fight and win.

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## Master Gunner Course

**SERGEANT FIRST CLASS RUSSELL K. BUTTS**

For the past three years, the 12-week Master Gunner Course at Fort Benning has been training master gunners to serve in Bradley battalions and companies — both Active Army and Reserve Component. Recently, as a result of a decision to place them at platoon level as well, the demand for master gunners has grown considerably. And the course has changed

in response to changing needs.

What do unit master gunners do? In brief, they are primarily training managers for and system advisors to their commanders. They plan training for Bradley gunnery, forecast ammunition needs, and coordinate necessary training resources to support the gunnery training program.

More specifically, master gunners as-

sist their subordinate units in the conduct of gunnery and crew drills for integrating and certifying newly assigned personnel. They are well versed in the organizational maintenance of the unit's fire control, electrical, and weapon systems, and are prepared to help maintenance personnel troubleshoot these systems; they are especially familiar with turret mainte-



nance. They supervise live-fire gunnery and monitor crew or squad proficiency. They are trained to assess their units' posture and to implement gunnery programs that are designed to sustain skills and correct deficiencies.

Because of the scope and difficulty of these duties, only the best qualified non-commissioned officers should be selected to attend the Master Gunner Course. To be selected, an NCO must:

- Be 11M/19D Bradley qualified.
- Be a staff sergeant or platoon sergeant, or, in MOS 11M, a sergeant.
- Have a minimum GT score of 100. (Reading and comprehension skills are critical.)
- Be assigned to a Bradley unit and have 12 months retainability in that unit.
- Meet the Army's height and weight standards. (Students are weighed during in-processing.)
- Be physically fit. (Students must pass the APRT administered before graduation.)
- Be selected by his battalion or squadron commander.

The instructors assume that the students are already proficient in *all* 11M Skill Level 3 tasks, and the POI is designed for that level. Previously, because of the lack of experienced noncommissioned officers in CMF 11M, the course taught Skill Level 1 and 2 tasks as well. Now, however, the students are given the Bradley Commander/Gunner Certification Test (BCGC) on the second day of training. Only those students who achieve a passing score of 70 percent (and 100 percent on all missed tasks on a retest) are allowed to continue in the course.

The Master Gunner Course concentrates on the functional duties of a master gunner — gunnery, maintenance, training management, range preparation, and tactics. The students spend many hours on organizational preventive maintenance checks and services (PMCS) on the hull, turret, and weapon systems, with most of the maintenance instruction focusing on the turret and the weapon systems.

Classroom instruction is reinforced with practical exercises using test equipment that is introduced during the instruction. System troubleshooting is also taught so the students will be able to identify turret problems accurately.



**Because of the Bradley's many weapon systems, master gunners are invaluable to their commanders in developing and implementing unit gunnery programs.**

Another topic that the course covers in depth is gunnery techniques. Gunnery is divided into two categories — prefire gunnery and target engagement, with most of the instruction on the latter. Prefire gunnery consists of instruction in target acquisition, range determination, fire commands and methods of engagement, and manipulation training.

Bradley Tables I through XII, the Unit Conduct-of-Fire Trainer (U-COFT), and other gunnery training devices are taught so the students will become thoroughly familiar with the execution and evaluation phase of the master gunner's duties.

The training management instruction in the course is designed to teach the students techniques for assessing unit skills and shortcomings to help their commanders develop productive gunnery programs. This instruction shows the students how to tailor programs to fit their units' needs and then how to support those programs with timely requests for resources.

The course also provides instruction on preparing ranges, using ballistic firing tables and scaled ranges, and setting up, operating and breaking down ranges. For live-fire ranges, the students are taught how to prepare surface danger area diagrams to make sure the live fire exercises are conducted safely.

To put the technical aspects of the BFV in perspective, students are now given 20 hours of tactical instruction.

Throughout the 12 weeks of the course,

the students are evaluated on their proficiency in master gunner skills. To graduate, a student must pass the APRT, receive a "GO" on all hands-on tests, and maintain an academic average of 80 percent. Each student receives an academic evaluation report for the course.

Although the Bradley Master Gunner Course has defined objectives, it is an evolving course. Comments from students and from units in the field help the Bradley instructors tailor the course to fit the needs of the Army. In fact, recent responses from the field have brought about some changes in the focus of instruction — more time is now spent on unit assessment, ammunition management, conduct-of-fire training, and sub-caliber training.

Master gunners have proved invaluable at all levels in helping commanders develop and implement unit gunnery programs. Through competitive unit selection processes, the responsiveness of the Master Gunner Course, and the commanders' effective use of their master gunners, the Army can now train highly competent crews capable of turning a Bradley fighting vehicle into an impressive fighting machine.

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# Bradley Training Devices

DAVID W. REISS

"Steel on target!"

"Live fire is the only way to train."

"If you're not miserable, wet, and dirty, you can't possibly be training."

These seem to be the conventional thoughts on training among infantrymen, but the introduction of high-technology, high-cost weapon systems has forced many to reconsider.

The Bradley infantry fighting vehicle (BIFV) is a perfect example of a high-tech, high-cost infantry weapon system. The ammunition is expensive for its TOW, its 25mm chain gun, and its 7.62mm coaxial machinegun, not to mention the cost of operating the vehicle. In addition to cost, ranges are also a problem. Tanks and Bradleys must compete for the same limited ranges and will do so in ever-increasing numbers in the future.

Both ammunition costs and the shortage of ranges will also limit the number of engagements each Bradley will be able to fire. For example, using the 25mm gun's high-rate-of-fire mode of 200 rounds per minute, a unit could fire its entire year's allocation of ammunition in five minutes. And the crew of a BIFV will get to fire a live TOW only once every four years.

The training challenge for the Bradley is magnified by the need to train alternate crews and gunners. With the M113, any one of the squad members can man the .50 caliber machinegun. This is not so with the Bradley, for special training is required for a soldier to move into its turret. In fact, alternate crews have to be as well trained as primary crews, because there is so much more they have to know.

When all of these factors are considered, the logical solution is to develop

more efficient ways to train — and this means using training devices.

In its search for suitable training devices for the Bradley, the Infantry School chose several existing or prototype devices, and the U.S. Army Infantry Board evaluated them in a project known as BIFV Gowen South. This project included testing several programs of instruction in which these devices were used for certain BIFV sustainment gunnery training events. (For details of these tests, see *INFANTRY*, July-August 1985, pp. 7-8.) Primarily, this meant



comparing the test soldiers' performance on the devices with their live fire performance on the squad combat qualification exercise (SCQE).

When the results of these tests indicated that the devices were effective, the School began formulating a Bradley training strategy that would include the use of some of them. The devices were considered on the basis of what they could do, what they would cost, what they would save, and how easy they would be to use and maintain. (These efforts included, of course, coordination with various departments of the School, higher headquarters, and field units.)

Under the proposed training strategy, still under consideration, the following devices will be used:

- **The Unit Conduct-of-Fire Trainer (U-COFT).** The U-COFT is a full-scale Bradley simulator that uses computer-generated imagery to produce every possible gunnery engagement or situation. It will replace certain of the present stationary vehicle live fire engagements.

- **The Bradley Gunnery Missile and Tracking System (BGMTS).** The BGMTS is an indoor trainer that uses an actual vehicle, 16mm film, and infrared and laser gunnery engagements. It will replace selected subcaliber gunnery tables.

- **The Precision Gunnery System (PGS).** The PGS is an outdoor trainer that uses an eyesafe precision laser to engage targets on an actual range, or vehicle against vehicle, using laser-target interface devices. It will replace certain moving vehicle live fire tables.

- **The Thru-Sight Video (TSV).** The TSV is a recording and critique device that allows for video recording through the Bradley's sights. It allows the crew to see not only what they did but also how well they performed. It will be used on all qualification tables.

- **The Bradley Subcaliber Device (BSCD).** The BSCD is a specially designed training device that uses the M16 rifle. It will be used in place of the BGMTS until that device can be procured.

The devices will be used for train-up gunnery exercises only. They will not be used for qualification firing.

With the devices, therefore, home-station gunnery training will take on new importance and significance. If a unit



establishes and maintains a device-based program of three to four hours a month for each crew, this training strategy will pay dividends, because over an annual gunnery cycle, the devices will enable a crew to increase its number of engagements from 121 to more than 1,400. (These figures are based on 40 engagements per hour for three to four hours per month using both the U-COFT and the BGMTS.)

At the same time, these devices will save on ammunition and vehicle operation costs; will reduce planning time, range congestion, and range personnel requirements; and will enable a unit to train more soldiers.

In the final analysis, the Infantry School can only recommend how these training devices should be used. Their integration into unit training will be a task for leaders in the field. But they *will*

work. In fact, given the live-fire limitations, they *must*.



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# Why Deflection?

MAJOR PETER R. MOORE

In INFANTRY's November-December 1985 issue, there appeared an article entitled "Mortaring: Can We Now Move Forward?" by Warrant Officer-1 Keith F. Hoyle of the British Army. The author, then attached to Fort Benning as part of a U.S.-British exchange program, discusses some problems with our current mortars and considers some possibilities new technology will make available. I am in partial agreement with Mr. Hoyle's proposals and would like to address one particularly interesting question — specifically, his proposal that we do away with deflection and lay mortars by azimuth, thereby simplifying fire direction procedures.

Field artillery has been laying on deflection angles ever since modern panoramic sights (6400 mil) were invented around the turn of the century, and mortars eventually adopted the same system.

Azimuths increase as the barrel turns clockwise, so the rule is Right Add, Left Subtract (RALS). Deflections increase as the barrel turns counterclockwise, so the rule is Left Add, Right Subtract (LARS) (or, as the Marines say, Port Increase, Starboard Subtract). Although fire direction center (FDC) students find this dis-

tinction a bit confusing, they eventually get used to it.

Mr. Hoyle is most unusual in refusing to take deflection for granted, in investigating the matter, and in concluding that deflection should be abolished. Indeed, it seems that plotting and laying on azimuths is simpler, and simplicity is certainly to be desired. Mr. Hoyle is slightly in error, however, in the following statement from his article:

*The sight scale rings, now numbered progressively in a counterclockwise direction, should be numbered in a clockwise direction in the same way as the aiming circle. This very simple modification would allow the complicated and unnecessary use of deflection to fade into obscurity.*

This implies that deflection is a counterclockwise angle. Although this does seem natural — when deflection increases, the barrel traverses left (counterclockwise) — deflection is actually a clockwise angle. The coarse deflection scales on the M53 sight are numbered counterclockwise simply because the index is stationary — if a sight is set at 0 deflection and then the micrometer knob is turned to cause the telescope to rotate clockwise, one can see that the coarse

scale also goes clockwise and the number against the index increases.

In short, the sight is already like the aiming circle, which is why a mortar can be reciprocally laid with the sight of another mortar substituted for the aiming circle. If the sight were changed to read counterclockwise angles, then something would have to be done either to the aiming circle or to its procedures.

Most mortarmen are not even aware that the sight reads clockwise, and most would have difficulty defining *deflection*. This is not surprising, because the mortar manuals that discuss the sight and the aiming circle don't define *deflection* either. They do provide some diagrams of deflections, but these diagrams are not all drawn consistently.

For example, Figure 42 of FM 23-92 (4.2-Inch Mortar, M30) shows a mortar with an M53 sight (that is, it has two deflection scales), but it shows a deflection angle that would be measured by an M34 sight (for an M53, the reading should be 5200 mils instead of 2000). Another example is Figure 43 in the same manual, which is geometrically equivalent to the true situation but which shows angles equal to 3200 minus the actual deflection. In fact, more than half of the

diagrams in FM 23-90 (81mm Mortar) and FM 23-92 make similar errors. A mortarman who wants to know what this strange angle is must dig the definition out of paragraph 12-5a, FM 23-91 (Mortar Gunnery): Deflection is the "horizontal, clockwise angle measured from the rearward extension of the axis of the mortar tube to the line connecting the sight and a designated aiming point."

## EFFECT

Nevertheless, the effect of deflection is to increase counterclockwise. The reason for this backward result is found in the way the sight and the barrel work. Angles are measured from a base (or zero) line to a reference line. Normally, the base line is fixed, while the reference line shifts. For example, when an aiming circle is oriented for reciprocal lay, its base or zero is the mounting azimuth, and it measures from that fixed base line to the reference lines of the different and shifting mortar sights. In contrast, the base line for the sight is the rearward extension of the barrel, which shifts whenever the weapon is traversed.

Consider what happens when a mortar has just been reciprocally laid, with its sight reading 2800 and the vertical hairline on the aiming posts, and the crew is ordered to shift to deflection 2900. First, the gunner refers the sight to 2900 — this moves the vertical hairline clockwise to the right. Next, he traverses left to the aiming posts — the base (the rearward extension of the tube) shifts counterclockwise, and the vertical hairline returns to its original reference line (the aiming posts). Thus, the counterclockwise effect results from a clockwise angle.

Nevertheless, Mr. Hoyle is correct in stating that renumbering the deflection scales (coarse and micrometer) in reverse would allow the mortar to lay on azimuths. Other changes would have to be made, however, and we would have to choose among several methods of doing this.

In the first of these methods, the black deflection scales (coarse and micrometer) would be reversed to read counterclockwise angles, while the red scales and the

aiming circle were left unchanged. Reciprocal lay and boresighting would not need to be changed and would be accomplished with the red scales. When reciprocal lay was complete, the telescope would be referred to the direction in which aiming posts were to be emplaced (red 2800, at present, though Mr. Hoyle suggests that we not lock ourselves into this direction), and the black scales would be slipped to read the mounting azimuth. The black scale would be used for firing, and the FDC could forget about deflections and work with azimuths. Whichever way the barrel was pointed, if the sight was on the aiming posts, then the black scale would read the azimuth of aim.

The disadvantages of this method include the fact that every mortar sight would need a deflection scale and an

azimuth scale working in opposite directions. Also, the M53 sight would lose the four ways in which the black scale can now be used.

(Incidentally, another deficiency of the mortar manuals is that they provide no coherent explanation of the black scale. They simply tell us in different places that in a certain situation we must slip the black scale and take readings from it. FM 23-91's definition of *deflection*, therefore, is incorrect for the black scale and for the M34 sight.)

In the second possible method, all sight deflection scales would be reversed into counterclockwise azimuth scales, while the aiming circle would be left unchanged and oriented for reciprocal lay in accordance with current doctrine. The gun would be set up with its 0-3200 line as



Mortar crewmen lay mortar during annual ARTEP.



at present (0 along the rearward extension of the tube). The aiming circle operator would then have to subtract his reading to the sight from 6400 to correct for the reversed sight scale. The gunner would index this difference on his sight and ask for a recheck. When each mortar was laid on the mounting azimuth, the gunner would refer to the direction in which aiming posts were to be emplaced and then slip his scale to read the mounting azimuth. Aiming posts would be emplaced, and the sight thereafter would read the azimuth of aim.

This method would require that the sight's scales be reversed and that index marks be put on the coarse scale and micrometer to allow the gunner to identify the axis of the tube. The disadvantage of this method is that the aiming circle operator would have to perform a subtraction problem for each deflection reading, and the gunner would also have one step added to his reciprocal lay procedure — slipping the scale.

In the third method, both the mortar sight and the aiming circle would be reversed to read counterclockwise angles. The aiming circle would be oriented for reciprocal lay by subtracting the declination constant from the mounting azimuth (reversing the present procedure) and then orienting on magnetic north. This would put the aiming circle's zero line on the mounting azimuth. The mortar would begin reciprocal lay with its zero line along the rearward extension of the tube, as at present. Lay would then proceed as at present until the barrel was on the mounting azimuth ("zero mils — mortar laid"). The gunner would then refer his telescope to the direction in which aiming posts were to be emplaced. The FDC would work with azimuths only, and the mortars would be laid on azimuths.

The disadvantages to this method are that both the sight and the aiming circle would have to be altered. Also, the aiming circle could no longer be used conveniently for measuring azimuths — unless it was given two scales, one clockwise and one counterclockwise. This method would be simpler than the other two.

From this, we can see that the idea of discarding deflections in favor of azi-



Crew prepares to fire.

muths is perfectly feasible. Some retraining and equipment modification costs would be incurred, of course, but if laying by azimuth resulted in real gains, these costs should be accepted.

Let's consider, then, the advantages and disadvantages of discarding deflection, using the third of the three possible methods, since it is simpler.

The advantages would go to the FDC. Forward observers would report target locations instead of gun-to-target direction, and mortar crew members would also have no real concern with the azimuth on which their weapons were laid. But FDC training would be simplified, as the puzzling matter of deflection and deflection indexes would no longer exist. FDC procedures upon arrival at a firing position would be one step simpler

because the computers wouldn't need to mark deflection indexes, and the firing chart or plotting board would have one less set of marks on it.

The disadvantages of laying by azimuth would mostly go to the gunners. First, gunners would have one extra step in reciprocal lay. The command "Refer to 2800 and emplace aiming posts" would become "Refer to 3600, slip your scales to (the mounting azimuth), and emplace aiming posts."

Also, when a platoon went out of action, the gunners would have to be told (or have to remember) to reslip their scales so that the 0-3200 line was once more parallel to the axis of the tube. This step would be necessary to make the sights ready for reciprocal lay at the next position, and index marks (as on the M64

sight) would be needed on deflection scales so that the 0-3200 line could be identified. (If this step were forgotten, reciprocal lay would be fouled up considerably.)

Next, instruction in the geometry of the sight would be more complicated — the 0-3200 line would be along one constant orientation during reciprocal lay but afterwards would be in different directions as dictated by the mounting azimuth.

Finally, the value of the aiming circle as an azimuth measuring instrument would be considerably reduced, unless we accepted the complication of two sets of scales — one clockwise and the other counterclockwise.

I can envision a few other aspects of this question, and INFANTRY readers may think of still others, but the discussion here seems to cover the mechanics and the major *pros* and *cons* of deflection versus azimuth. I believe deflection

is simpler and therefore preferable, but the case is not overwhelming. Nevertheless, Mr. Hoyle has done us all a favor by asking us to think through an ancient procedure that we have tended to take for granted.

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**Major Peter R. Moore** is an Infantry Reserve officer now serving as adjutant of the 11th Special Forces Group at Fort Meade. While on active duty he served as a 4.2-inch mortar platoon leader with the 8th Infantry Division. In his civilian job, he is legislative assistant to a U.S. senator.

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## Antiarmor Weapons in Cities

CAPTAIN FRANK A. EMERY

Because of the extensive urbanization in Western Europe, we have known for a long time that any future war there is likely to include combat in cities. The Soviets have known this, too, and have prepared for it. (See "Soviet Military Operations in Built-Up Areas," by Major A.E. Hemsley, INFANTRY, November-December 1977, pages 30-34, and "MOUT and the Soviet Motorized Rifle Battalion," by Lieutenant Colonel Lester W. Grau, INFANTRY, January-February 1985, pages 24-27.)

The current Soviet doctrine for combat in cities shows that a Soviet division will operate in two echelons at each level of command and use frontages of four to six kilometers, with two to three kilometers for a regiment, 400 to 600 meters for a battalion, and 200 to 300 meters for a company.

The divisional and regimental axes of advance will be along major roads so that these units can capture key areas, disrupt the defense, and cross the area in the shortest possible time. A battalion might

advance on two or three parallel streets, with one company axis per street.

During offensive combat in cities, Soviet artillery will be decentralized. Up to half of it may be attached to assault

groups and used in its direct fire role. Howitzers and mortars will be used for counter-battery tasks. Preparatory fires will be shorter than normal, 5 to 20 minutes usually. Tanks will be used to sup-



TOW crew prepares for a shot during training with the Berlin Brigade.



port infantry and to neutralize enemy strongpoints. Soviet doctrine calls for strong reserves of tanks at both battalion and regimental level.

Clearly, then, if our infantry units are to have an advantage in combat in cities, we must have some efficient means of getting firepower into the killing zone from all sides, especially from the flanks. But our current antitank weapons have certain limitations that may make them ineffective in city streets.

First, antiarmor ranges in city streets will not usually exceed 1,000 meters. Although our light antiarmor weapon (LAW) has the appropriate range, its ability to penetrate Soviet armor is questionable. (The AT-4 may do somewhat better in this regard.) Conversely, the TOW and the Dragon have proved that while they can destroy Soviet tanks on a conventional battlefield, they may not be as effective in cities because they cannot take on targets at short ranges. In addition, both of these weapons are antitank guided missiles (ATGMs), and the tracking distances will be limited; there is little open terrain in cities where a gunner can track a target for the required 5 to 16 seconds.

There are other limitations to using ATGMs in cities, primarily because of the numerous obstacles found there. One of the most overlooked of these is electric power lines. In the Federal Republic of Germany, for instance, voltages in power lines range between 8,000 and 100,000 volts, and TOW guidance wire is insulated to withstand only 100 volts. High voltages can induce currents in a TOW guidance wire, and while they might not break the wire immediately, they can melt the wire's insulation and

flow back to the gunner and the TOW vehicle. Even the best electrical ground can reduce this voltage by only a fraction. Obviously, such voltages can cause serious injury to a gunner and serious damage to the ground equipment.

Another obstacle for TOW and Dragon gunners is the tank barriers that we will probably emplace along the armor avenues of approach. An abatis is such a barrier. For an abatis to be effective, the stumps in it must be 5 feet high, the tree length 20 feet, and the barrier depth 250 feet. Such a barrier will decrease the effectiveness of an antitank gunner because it will interfere with his target sight and cut the wires to the missile. Triple-strand concertina wire that stands over 5 feet high can also cut TOW and Dragon wires.

## ENGAGEMENT

The urban environment itself provides a substantial obstacle, because it forces the gunners to engage armor targets from the front. Frontal engagement is not recommended, because a gunner's position can be more easily identified by his weapon's backblast. Also, the mobility of the TOW systems could be seriously limited because of the debris created by indirect fires. Finally, urban conditions may not permit a TOW system to engage its target from a mounted position, and when TOWs have to be dismounted, the heavy equipment will burden the crew and greatly reduce its mobility.

Another problem with our antiarmor weapons is that we overlook the importance of conducting tactical training with them. For some time, we have empha-

sized tracking with the TOW using the M70 training set while placing little or no stress on training in tactical skills. (This emphasis on tracking seems to stem from the fact that the M70 trainer generates numerical scores that can be used to separate good TOW gunners from bad ones. Tactical training, on the other hand, is hard to evaluate — especially when an individual does not understand the expected level of warfare, the threat, and the common engagement situations to be trained for.)

The Soviets recognize that close combat is one of the most characteristic features of action in a city and that it requires a special organization of their system of fires. The chief role in that system is played by the infantry with its small arms and grenades supported by armored vehicles and mobile artillery. Accordingly, to counter the Soviet offensive threat, we must develop a multilevel and multilayered field of fire over the entire terrain in front of a defended object as well as within buildings.

In recent years other nations have been making improvements in their close-range antiarmor weapons. We, too, must recognize their importance and come up with an alternative to our current weapons. We can either develop such an alternative ourselves or adopt a weapon developed by one of our allies. Either way, we must give our infantrymen a weapon they can use effectively in urban warfare.

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**Captain Frank A. Emery** recently completed the Infantry Officer Advanced Course and is now assigned to the 2d Infantry Division in Korea. He previously served with the 502d Infantry in the Berlin Brigade.

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# ENLISTED CAREER NOTES



## THIRD-YEAR DRILL SERGEANT PROGRAM

Any drill sergeant who is considering extending for a third year should make sure he understands what he will get in return for that third year. His decision should be based upon a sincere desire to continue in the drill sergeant program, not on the possibility of a choice of assignment upon completion of that duty.

AR 614-200, paragraph 8-22b states: "Soldiers who extend their 24-month tour of drill sergeant duty for an additional 12 months will, on completion of a 36-month tour of drill sergeant, be reassigned to the location of their choice provided a valid requirement exists at such location." The key part of that sentence is "provided a valid requirement exists at such location." In short, no requirement, no assignment.

When the third-year drill sergeant's career management individual file (CMIF) is returned to his branch, ten months before the end of this stabilization, his preferences will be compared with the existing requirements. The reporting date for the new assignment must be compatible with the end of the drill sergeant stabilization, and the soldier must be qualified for that assignment.

When a drill sergeant requests the extension for the third year (using DA Form 4187), he should list on the form his three locations of preference. If he asks for Hawaii, Japan, and Fort A.P. Hill, however, he will not get any of his preferences. At this point, his assignment will be considered from his DA Form 2635 (Enlisted Preference Statement) and what is available that will provide him with professional development.

When selecting choices for his next assignment, he should make sure they are realistic. An 11B has a better chance of being assigned to Fort Ord or Fort Benjamin Harrison than he has of going to Fort Benjamin Harrison or Fort Huachuca or any

other installation that is authorized only a small number of 11Bs. This also pertains to overseas areas.

One other consideration should be the time since his last overseas assignment. If the soldier is eligible for overseas service and selects a stateside location, he may be there for only the one-year period he picks up as the PCS stabilization.

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## ENLISTED STANDBY ADVISORY BOARDS

Selection for promotion is an area that can be severely affected by errors in the records a promotion selection board reviews. To remedy this situation and to make sure all NCOs are treated equally and not penalized either by their own errors or by errors in the maintenance of their files, the Army conducts Enlisted Standby Advisory Boards (STABs).

These boards are convened at MILPERCEN's Enlisted Records and Evaluation Center (EREC) at Fort Benjamin Harrison, Indiana. They consider soldiers whose files either did not appear before a recent board because of administrative error, were found to contain documents that the board should not have seen, included someone else's documents, or were missing documents that should have been there.

These boards are scheduled about six months after the annual selection board for a given rank. A combined board for selection to master sergeant and sergeant major is held because of the few records that appear before the board. It is normally scheduled to convene each year in February. The sergeant first class board is scheduled for each June.

In addition to these two boards, others are held throughout the year in conjunction with the regular promotion boards. These other boards consider NCOs for promotion to sergeant first class, master sergeant, and sergeant major, and are

held in October, March, and July.

Before an NCO can be considered for a STAB, certain criteria must be met and specific procedures must be followed as detailed in Paragraph 7-44 of AR 600-200.

The first category considered for STAB is made up of files that were within the established zone (primary or secondary) of a previous selection board but were not considered. (This is the only time NCOs in the secondary zone are eligible for STAB.)

The second category is made up of files submitted for reconsideration because they contained major errors when they appeared before a promotion board. (MILPERCEN will determine whether a file contained material errors. Errors are considered material when there is a reasonable chance that the soldier might have been selected for promotion if the error had not occurred.)

Any request for an NCO's records to appear before a standby advisory board must be submitted through his chain of command to the servicing MILPO for evaluation to make sure his case meets the criteria. The case is then forwarded by the MILPO to MILPERCEN, (DAPC-MSP-E), Alexandria, VA 22332-0400.

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## BFV INFANTRYMEN

The transition from MOS 11B to 11M continues, but the Enlisted Master File (EMF) is not being updated quickly and thoroughly enough to keep soldiers with MOS 11M going to the right places. This creates several problems: The Army cannot effectively use the unique skills the Bradley Fighting Vehicle infantryman has; units that need BFV infantrymen remain short of soldiers with needed skills; and the individual soldiers suffer from not being assigned to a position where their skills can be kept current.

If your PMOS is 11M and you have



been notified that you are on assignment instructions to move to another location, you should double check during your levy to make sure the MOS required for the assignment is 11M. If you are being assigned to any other MOS requirement (with the exception of drill sergeant duty), you need to immediately bring this to the attention of the personnel there. A phone call to your career advisor or assignment manager at MILPERCEN is usually all it takes to verify the assignment instructions.

Remember, you are promoted and selected for higher level schooling on the basis of your potential, and one of the best indicators of potential is solid performance in a TOE unit within your primary MOS.

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### HOMEBASE/ADVANCED ASSIGNMENT

Many questions are directed to the Infantry Branch concerning eligibility for the Homebase/Advanced Assignment Program (HAAP).

Enlisted personnel in the ranks of sergeant and above (except for sergeants major/command sergeants major and promotable master sergeants/first sergeants) stationed in CONUS who are assigned overseas to dependent-restricted 12-month short tours will be informed of their next assignment before leaving CONUS. When possible these soldiers will be returned to the place of prior assignment.

Members of COHORT (cohesion, operational readiness, and training) units

under the new manning system who are deployed overseas for unaccompanied 18-month long tours may voluntarily elect a homebase assignment. Advanced assignment to CONUS will also be given to members in those grades who go from an overseas long tour to a dependent-restricted 12-month short tour.

A specialist-4 who is on a promotion list, in receipt of assignment instructions, and promoted to sergeant before departing from his losing duty station will be given a HAAP assignment. A specialist-4 who is on a promotion list to sergeant, but who is not to be promoted until after he arrives in the short-tour area, is eligible for a HAAP assignment. He should initiate a DA Form 2635 preference statement about 10 months before his scheduled DEROS (date eligible to return from overseas).

A soldier who is assigned to an accompanied tour and voluntarily elects to serve a 12-month "all others" tour is not eligible for a HAAP assignment.

Hawaiian residents may be given HAAP assignments to Hawaii. CONUS residents and residents outside the contiguous forty-eight states, less Hawaii, will not be involuntarily homebased in Hawaii.

A request for a change of HAAP submitted by a soldier currently serving in a short-tour area will normally be disapproved, but exceptions will be reviewed on a case-by-case basis when submitted by the soldier to the Infantry Branch.

Soldiers who already have HAAP assignments but elect to extend their foreign service tours will normally be reassigned to their original HAAP assign-

ments provided a valid requirement exists at the original location of the approved HAAP. If there is no valid requirement at that location, the soldier will be reassigned to a location in CONUS where one exists.

Soldiers serving in a dependent-restricted short-tour area who are selected to attend the Sergeants Major Academy upon their return to CONUS and who have previously been given a HAAP assignment will no longer be eligible for that assignment. If these soldiers decline attendance, however, they will be reassigned to their originally approved HAAPs upon their return to CONUS.

Soldiers who are qualified parachutists (SQI "P") will be provided a HAAP assignment to installations that are authorized parachutists, except when assignments exceed parachute-qualified soldier requirements at the installation.

Although Infantry Branch will make every effort to honor all HAAP assignments, these assignments may be changed as necessary to meet the needs of the Army.

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### UPDATE TO AR 27-10

An upcoming revision of AR 27-10 will reflect the elimination of the 1 November 1985 cutoff date for petitions to move old Article 15s from the performance (P) fiche to the restricted (R) fiche in your official military personnel file (OMPF).

The previously used procedures will remain in effect until the update has been distributed to the field.



# OFFICERS CAREER NOTES



## INFANTRY EDITORS GOOFED

In this section of INFANTRY's January-February 1986 issue, an item on graduate degrees for officers indicated that ROTC instructor duty makes it easier for an officer to get an advanced degree. This is in error and came from a 30 August 1985 MILPERCEN news release that was corrected a few days later.

Many Infantry captains and field grade officers have opportunities to serve as assistant professors and professors of military science at universities throughout the United States. The principal responsibilities of ROTC duty include preparing and conducting college level classes, recruiting, supervising ROTC cadets in leadership duties, and counseling students on academic, military, and personal matters. A critical responsibility involves serving as an effective role model on campus to help foster a positive image of the military profession.

Officers who are eligible for ROTC duty should not view the assignment as a likely avenue to an advanced degree. The broad scope of responsibility as a leader and instructor normally precludes enrollment in graduate classes.

ROTC duty gives infantry officers an opportunity to enhance their leadership skills and to help develop the future leaders of our Army. The nomination process normally begins around September of each year with a report date the following July. Officers who are available and interested should contact their assignment officers in July or August.

**COL GARY A. SORENSEN**  
Public Affairs Officer  
MILPERCEN

## MILITARY QUALIFICATION STANDARDS

Military Qualification Standards (MQSs)

have been developed and are now being implemented in the Army. These standards are designed to provide a training strategy for officers from their pre-commissioning through their tenth year of military service.

Cadets in ROTC and at the U.S. Military Academy and officer candidates at the Officer Candidate School at Fort Benning receive training under MQS I. Lieutenants generally receive MQS II training, and captains MQS III.

The MQS system places the responsibility for personal competence on the shoulders of the individual officer. Army trainers have determined what an officer must be able to do, and they provide training so that each officer can perform in a particular branch and at the appropriate level. The field commander serves as a mentor, providing an environment in which a young officer can develop.

MQSs are made up of two components—military tasks and knowledge and professional military education.

The military task and knowledge component of MQS I trains cadets in the basic soldier and leadership skills a lieutenant must have when he is commissioned. These skills provide a foundation for the additional leader and branch skills that will follow.

The professional military education component of MQS I requires the following:

- A baccalaureate degree, including three mandated courses (in written communication, human behavior, and history). In addition to these mandated courses, studies in management and national security affairs are recommended. (Lieutenants commissioned through OCS may defer this requirement for up to 10 years.)

- Mastery of tasks and subject areas. Cadets receive an MQS I manual that presents 64 tasks and 19 military subject areas. The manual presents its contents

in the familiar "task, condition, standard" format.

So that precommissioning training can be standardized, each task and military subject is supported by a training support package. For instance, a package of instructional materials goes to each senior ROTC institution. Every Professor of Military Science has the same lesson plan for tasks and subject areas. This helps to standardize precommissioning training while giving the PMS ways of adjusting training to the cadets' capabilities and needs.

To be recommended for commissioning, a cadet must qualify on all military skills and professional knowledge subjects. The Professor of Military Science certifies MQS I completion.

MQS I is now being phased into all precommissioning training. The USMA and ROTC implemented MQS I in the 1982 school year, and in the 1986 school year, all graduates will be certified in MQS I. OCS at Fort Benning has been using MQS I since January 1984.

Unlike MQS I, MQS II will be a branch-specific program. Each branch school will develop its own MQS II manual to give lieutenants a picture of where they are professionally and of how they can improve their skills.

MQS II builds upon MQS I, with more advanced military task skills and professional education components. The manuals consist of a common task element and the branch manuals.

The common task manual portrays the tasks all lieutenants must be able to perform. Branch-specific manuals outline the training strategy for each branch, providing information on tasks trained in resident courses and at the individual officers' units.

Four TRADOC schools (Infantry, Field Artillery, Military Police, and Missile and Munitions) conducted a year-long evaluation of the MQS II manuals. Each school analyzed the job



requirements for lieutenants assigned to their branches and identified critical tasks performed in various duty positions.

An MQS II field evaluation was conducted from November 1982 to November 1983. Lieutenants in the participating units used the manuals to train in and perform selected tasks. Feedback from this field test was used in planning for the Armywide MQS II, which was approved in July 1985. MQS I was also approved as it is presently conducted.

MQS II, which is to be implemented during Fiscal Year 1987, will serve as a professional development tool and a training guide for junior officers and their commanders. They will form a partnership that will work to foster professionalism in every unit.

Lieutenants will use the MQS II manuals to help them attain and maintain task proficiency. Commanders will use them to identify the specific training needs of their lieutenants. In this manner, the lieutenant and his rater will be able to work together in setting the goals reflected in the lieutenant's OER support form (the new DA 67-8-1).

These goals may come from the task lists and reading lists presented by the MQS manual, and this is where the

"mentor" function comes into play. The MQS system helps leaders fulfill their roles as mentors by focusing on precise branch or common tasks the young officer needs to perform effectively in a particular duty position.

Just as MQS II was tested before being implemented, MQS III is undergoing a similar process. The results of the MQS III tests are expected to be available soon.

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## **WARRANT OFFICER TRAINING SYSTEM**

The Warrant Officer Training System (WOTS) is being implemented with branch participation at every step. The three-year-old system has given the Army's warrant officer corps the standardized training structure it previously lacked.

The system will include three phases—pre-appointment, advanced, and senior. The plan also calls for two certification processes. The first of these consists of Technical Certification Task Lists and Technical Certification Diagnostic Examinations by MOS. These lists and examinations will apply mainly to warrant officer candidates. The idea is to determine what tasks are critical to a certain

MOS and measure how well a person can perform those tasks according to a set of standards.

Initial certification will probably be conducted by MOS proponents during the training part of each phase, with MOS verification by commanders during the utilization part.

The 30-Year Career Plan approved by the Army provides a general, MOS-immaterial plan for all warrant officers. It outlines the training, utilization, and certification periods in the warrant officer, senior warrant officer, and master warrant officer career phases established by the Army.

Plans have been outlined for the system's third career phase, now called Master Warrant Officer Training, since the Army established a requirement for MWO slots in each warrant officer MOS. Once MWOT has been fully implemented, MWO slots can be filled by graduates at the warrant officer-4 level. Later, they may be filled at the new rank of warrant officer-5, pending approval of that grade.

The Warrant Officer Training System is a case of warrant officers helping to solve the problems of the corps themselves, with Total Army involvement and constant feedback right to the top.



# BOOK REVIEWS



In this issue we would like to call your attention to a number of excellent reference works that have recently come our way:

• **THE CHALLENGE OF COMMAND: READING FOR MILITARY EXCELLENCE**, by Roger H. Nye. Avery Publishing Group, 1986. 187 Pages. \$9.95, Softbound. After giving his thoughts in separate chapters on such subjects as the challenges of a commander, the commander as tactician, the commander as moral arbiter, and the commander as mentor, the author, a retired U.S. Army officer, lists at the end of each chapter books he considers pertinent to the subject under discussion. He includes works of fiction, the chief one being Anton Myrer's *Once An Eagle*. (The shortest list of all — 12 titles, of which 3 are fiction — follows Nye's chapter on the commander as moral arbiter.) He also includes a list of "first books for officers who are to become readers," a good bibliography, and an index. All Infantrymen should read this book.

• **U.S.-SOVIET MILITARY BALANCE, 1980-1985**, by John M. Collins. Pergamon-Brassey's, 1985. 360 Pages. \$50.00. This is not John Collins' first such effort; an earlier work dealt with the same subject, but for the 20-year period between 1960 and 1980. That study, as this one, was commissioned by members of the United States Congress, senators and representatives.

Collins, a retired U.S. Air Force officer who now serves as a senior specialist in national defense matters at the Library of Congress, has become an acknowledged expert in comparing U.S. and Soviet war-making abilities. This book, like his previous one, uses several hundred pages of tables, charts, graphics, and statistics to buttress Collins' main arguments. There is no publication in the unclassified realm that remotely compares with this one. He pulls no punches

and lets the chips fall where they may.

• **STRATEGIC DEFENSES**, by the Office of Technology Assessment. Princeton University Press, 1986. 475 Pages. \$12.50, Softbound. Here is another publication based on a U.S. Government study, this one also prepared for the U.S. Congress, as was John Collins' report. The original reports—there are two of them—were made public in September 1985 and printed separately by the Government Printing Office in a limited quantity. In this volume, the Princeton University Press has brought both reports under one cover and has made them widely available to the general public.

The reports were prepared by the Office of Technology Assessment, an office created in 1972 to serve as an analytical arm of Congress. As such, the office provides Congress with independent and timely information about the potential effects of technological applications. The two reports here gathered together are *Ballistic Missile Defense Technologies* and *Anti-Satellite Weapons, Countermeasures, and Arms Control*. In short, the reports outline the political, military, and technological controversies concerning the present highly publicized strategic defense initiative (SDI) and present an assessment of a wide range of strategic criteria. In reality, both reports provide more questions than answers, and while they are certainly not the easiest things to read, all Infantrymen should make the effort to read into the problem and to become more familiar with a program that may seriously affect their future military roles.

• **AMERICAN DEFENSE ANNUAL, 1985-1986**, edited by George E. Hudson and Joseph Kruzell. Mershon Center, The Ohio State University. Lexington Books, 1985. 277 Pages. \$23.00. This is the first of a planned annual series on U.S. defense matters, and all Infantrymen should become familiar with it, because there is no other publication that

devotes itself exclusively to U.S. security policies and problems. There are 11 separate essays in this book prepared by 17 different authors; the essays cover such diverse subjects as arms control, the defense budget, defense strategy, and low intensity warfare. The book also has a 1984 chronology, a 1984 defense bibliography, a list of U.S. security commitments in 1985, and an index.

• **MILITARY MOTORCYCLES**, by David Ansell. David and Charles, 1986. \$28.00. The author is a motorcycle enthusiast and historian in addition to being a freelance designer and artist. In this book, Ansell presents 102 motorcycle models from around the world that he feels best represent the development of the military motorcycle from 1904 to the present. Each model is accompanied by a detailed drawing done by the author, a concise history, and technical specifications. (Eight of the models are from the United States.) He also offers a table of specifications of more than 300 military motorcycles that date from 1904. Ansell says his study is not a definitive one, but there is little question it includes the principal models that have been adopted.

• **ATLAS OF GLOBAL STRATEGY: WAR AND PEACE IN THE NUCLEAR AGE**, by Lawrence Freedman. Facts on File, 1985. 192 Pages. \$22.95. The author is a professor of war studies at King's College London. This is his fourth published book and in it he tackles such subjects as the changing international order, warfare since 1945, the nuclear arms race, and conventional war. He writes easily but authoritatively, and each of his major subdivisions is profusely illustrated with splendid maps, black-and-white and full-color photographs, and numerous other graphic features. He feels that after all is said "it is prudent statesmanship upon which we must rely if the most awesome of the many engines of war that we have described are not to be set in motion."



• **AIR DEFENSE ARTILLERY**, compiled by Janice E. McKenney. Army Lineage Series. Center of Military History, United States Army, 1985. 429 Pages. GPO S/N 008-029-00130-6. \$27.00. This, the latest volume in the Army Lineage Series, contains the lineages and honors of the 24 Regular Army and 5 Army National Guard air defense artillery regiments in the force structure at the end of 1982. Each entry also has a colored illustration of the regimental coat of arms and distinctive insignia, a description of the heraldic items, and a regimental bibliography. Janice McKenney is the supervisory historian in CMH's Historical Services Division.

• **POCKET GUIDE TO THE WORLD**, by Bernard Stonehouse. Facts on File, 1985. 512 Pages. \$18.95. It was the author's intention to design a pocket sourcebook that "would serve other armchair geographers, provide a quick reference book for businessmen and travelers, and perhaps serve as a sourcebook for students, teachers, journalists, TV presenters, and others with similar needs." His book does those things, and perhaps more. Certainly it can be a welcome addition to any personal library.

• **ABOVE AND BEYOND: A HISTORY OF THE MEDAL OF HONOR FROM THE CIVIL WAR TO VIETNAM**, by the Editors of Boston Publishing Company in cooperation with The Congressional Medal of Honor Society. Boston Publishing Company, 1985. 346 Pages. \$39.95. This lavishly illustrated book combines pure history and pages of statistics with essays and high personal accounts to present a comprehensive story of the Medal of Honor, America's highest award for military valor, of which 3,412 have been awarded to 3,394 recipients since it was instituted in 1861. (The difference is accounted for by the fact that there have been a number of double awards.) It is interesting to note that beginning with World War I most of the awards have been made posthumously. The book also has a complete register of the recipients, a most useful bibliography, and a general index.

• **THE SPRINGFIELD 1903 RIFLES**, by William S. Brophy. Stackpole Books, 1985. 616 Pages. \$49.95. This book, a collector's dream, is said to be "the illus-

trated, documented story of the design, development, and production of all the models, appendages, and accessories" of the Springfield 1903 rifle. It is certainly that, and is one of the outstanding reference books of 1985. The author is a retired U.S. Army Reserve officer who has four other published books — three on small arms — to his credit. He has used and collected Model 1903 rifles for many years and points out that the rifle is now "a desirable military collector's arm the world over." The book also contains numerous photographs (one of the author with an '03 rifle taken in 1934), drawings, and tables. There is also a useful bibliography and an index.

• **THE NCO GUIDE** (Second Edition), by Dan Cragg. Stackpole Books, 1986. 310 Pages. \$14.95, Softbound. This guide was preceded by *The Noncom's Guide*, which was published in 21 editions and written by Charles O. Kates. Now, Dan Cragg, a retired U.S. Army Sergeant Major, has collected up-to-date information from many military sources to provide today's noncommissioned officer with guidelines for every official and social situation. Numerous photographs, line drawings, and charts are included, and new illustrations detail the latest uniform changes. This is an excellent source of information for the Infantry NCO.

Here are a number of other books we think you should know about:

• **SOVIET ARMED FORCES REVIEW ANNUAL, VOLUME 9, 1984-1985**. Edited by David R. Jones (Academic International Press, 1986, 313 Pages). Reviewed by Major Don Rightmyer, United States Air Force.

This is an outstanding annual series in that it provides an authoritative analysis of the Soviet military establishment.

The editor of this ninth volume in the series, David Jones, sets the stage for the book with a 35-page introduction that provides a broad overview of the significant events in the USSR's military development during 1984-1985. He discusses the early effects of Mikhail Gorbachev's assumption of power as well as the numerous changes within the Soviet military leadership ranks during the period under review. This introduction is complemented by an in-depth statistical

analysis that documents up-to-date data on such subjects as weapon system levels, unit strengths, and listings of senior Soviet military leaders.

More than half of the book consists of reviews of significant trends and changes in the five arms of the Soviet armed forces (strategic rocket forces, ground forces, air defense, air forces, and navy) as well as the Soviet economy, the Far East, and the Soviet space program. The book's strength as a reference source is reflected by some 85 maps and numerous tables and charts that help clarify the written narratives.

The book concludes with three chapters on special topics and a comprehensive bibliography. It is one of the best reference handbooks available on the Soviet armed forces.

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**DEAR AMERICA: LETTERS HOME FROM VIETNAM**. Edited by Bernard Edelman (Norton, 1985. 316 Pages. \$13.95). Reviewed by Doctor Joe P. Dunn, Converse College.

No one knows how many pieces of personal correspondence flowed in and out of Vietnam during the long years of the war, but one thing is certain — mail was the most important element in each serviceman's life. And the letters collected here, examples of the vast correspondence, probably capture better than any other source the thoughts, fears, and hopes of the ordinary soldier.

In response to a public appeal by the New York Vietnam Memorial Commission for materials from veterans, over 600 individuals submitted Vietnam correspondence — a total of some 300 pieces. For this volume, 208 pieces written by 125 different people were chosen. Admittedly the letters were edited to eliminate repetitions, private, and tangential information, to correct and regularize spelling, and to indent paragraphs. But the authenticity and power remain.

The letters capture many of the myriad aspects of the Vietnam experience at the different times, places, and conditions of the war. And they reflect the lives, experiences, and concerns of ordinary soldiers whether in the field or in the rear areas. The common thread is that all these young men and women, far from



home, were striving to convey some sense of their reality as they saw it.

The letters are grouped by subject, and after each piece the editor lists the writer, his unit, dates of tour, and his present position today. Many of the letters are particularly poignant because the author did not return alive.

This may not be the most profound book in print on Vietnam, but it is one of the more real and captivating.

**MILITARY DOCTRINE AND THE AMERICAN CHARACTER: REFLECTIONS ON THE AIRLAND BATTLE.** By Herbert I. London (National Strategy Information Center, 1984. 67 Pages. \$4.50.) Reviewed by Colonel James B. Motley, United States Army Retired.

In this succinct study the author writes that "victory on the battlefield is partly a function of how we [U.S.] prepare to fight. This highly abstract process . . . must be made concrete through a discussion of strategic, operational, and tactical issues. That cannot be done through quantitative analysis alone . . . It requires observation, evaluation, and recommendations."

With these comments serving as a basis for his study, Herbert London — Dean of the Gallatin Division, New York University, and Senior Fellow at the Hudson Institute — examines the modifications in training and doctrine that have been introduced by the U.S. Army for contemporary combat conditions. His analysis, as the title of the study implies, focuses on the maneuver warfare ideas in the current AirLand Battle doctrine and evaluates the computerized training procedures that have been designed to implement that doctrine. He also considers the broader relationship between national interests and military strategy.

Perhaps the strength of this book is in the author's ten recommendations, which are based "on the belief that the text of Field Manual 100-5, in its latest iteration, is the most desirable direction for the U.S. Army to take for its doctrinal guidelines and training procedures." But he warns, "There is no set of principles fully applicable across the entire spectrum of conflict. None can assure victory in battle." As Clausewitz noted, "As soon

as preparations for a war begin, the world of reality takes over from the world of abstract thought."

This informative, well-written book will appeal to the serious student of national security.

**GOING TO WAR WITH JAPAN, 1937-1941.** By Jonathan G. Utley (University of Tennessee Press, 1985. \$19.95). Reviewed by Captain Randy Jay Kolton, United States Army.

Since that fateful day in December 1941 when Japan bombed the U.S. fleet at Pearl Harbor, historians have attempted to unravel the military, political, and diplomatic considerations that induced Japan's leaders to support the attack and to explain why U.S. political and military leaders were so unprepared for it.

Claims of conspiracy in the U.S. leadership ranks abound, with the advocates of those claims seemingly unwilling to accept the explanation that those leaders blundered badly while trying to do their jobs to the best of their abilities. If one discards the conspiracy theories and accepts the premise that the U.S. military and political officials in 1941 were among the brightest and most talented of their age, then other considerations must be examined. Jonathan Utley does just this in his meticulous examination of Secretary of State Cordell Hull's handling of U.S. policy toward the Far East and of the activities of the various executive agencies in the U.S. Government to show why and how U.S. and Japanese relations deteriorated and why Japan's leaders eventually felt compelled to attack the United States.

Central to Utley's discussion is Hull, the aging Tennessean devoted to Wilsonian ideals and to free trade. Throughout the 1930s, President Franklin D. Roosevelt permitted Hull a free hand in overseeing U.S. foreign policy in Asia. With his associates in the State Department, Hull hammered out policies that were designed to protect the open door in China, preserve U.S. commercial interests in the region, and project a U.S. presence in the Far East.

Still, State Department officials disagreed on how to respond to Japanese aggression and on how to use U.S. mili-

tary forces and economic sanctions to compel Japan to accept U.S. demands for equality of economic and political opportunity in Asia.

By concentrating on Hull and the State Department, Utley incorrectly relegates Roosevelt to the role of a mere observer of developing U.S. foreign policy in the Far East. Although the President was certainly ambivalent regarding this country's policy toward Japan throughout this period and was sensitive to swings in public opinion, he still made the critical decisions that influenced the direction and outcome of U.S. Far East policy. Utley also minimizes the contributions of presidential advisors such as Henry Morgenthau and Harold Ickes. In addition, he inadequately conveys the fact that faulty assumptions contributed to grave errors in judgment on the part of administration officials and influenced Japanese leaders to undertake the risky assault at Pearl Harbor.

Despite these shortcomings, Utley makes a valuable contribution to the historiography on the causes of the war between Japan and the United States, and he vividly describes the complexities of U.S. foreign policy during the late pre-war period. Military history buffs, historians, and students of World War II should find this book enormously useful.

**GERMAN MILITARY INTELLIGENCE, 1939-1945,** by the Military Intelligence Division, U.S. War Department (University Publications of America, 1984. 321 Pages. \$29.50). Reviewed by John Carroll, Silver Spring, Maryland.

Now at last, some 40 years after the end of World War II, there appears an authoritative and informative study on German World War II military intelligence. Actually, shortly after the end of hostilities, Allied and U.S. intelligence officers had prepared two classified reports on the German intelligence efforts, and it is those studies that form the core of this volume. The Defense Department eventually declassified this material and the publisher has brought it out as a volume in its Foreign Intelligence Book Series under the editorship of Thomas Troy, the Author of *Donovan and the CIA*.



The work covers the organization and operations during World War II of I-C, German Military Intelligence, the equivalent of G-2 in the U.S. military establishment. It was part of the *Oberkommando des Heeres* (Army High Command), and its two main components were *Fremde Heere Ost* (Foreign Armies East) and *Fremde Heere West* (Foreign Armies West). There are enlightening insights into I-C's relationship with other components of the Nazi German intelligence and security community, especially the *Abwehr* (the military secret service) and the *Sicherheitsdienst* (SS), the main political information group in the Third Reich.

Even today these studies have a certain relevance to current world problems, in addition to being of considerable historical interest. It is apparent from reading between the lines that German General Reinhard Gehlen and his men of *Fremde Heere Ost* willingly presented to the victors much of the intelligence in these studies. In effect, Gehlen and his men were working their way over to the West by revealing their information on the Soviets.

This book also contains some good organizational charts, flow charts, and maps, as well as some poorly reproduced ones. The conclusions drawn from these by the Allied intelligence people indicated that the Germans had good organization,

numerous qualified personnel, and practical operations. On the other hand, there was a lack of central control and evaluation, little direction, a haphazard appreciation of reports, and a considerable amount of internecine fighting at the top in the Fuehrer's headquarters.

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**THE ROOT**, by Eric Hammel (Harbrace Brace Jovanovich, 1985. 426 Pages). Reviewed by Doctor Mike Fisher, University of Kansas.

Eric Hammel's recent historical narrative records in detail the U.S. Marine deployment at Beirut International Airport from August 1982 to February 1984. The book, whose title comes from the Marine name for Beirut, focuses on the impressions of the Marine participants. Hammel does introduce other factors in the complex, multidimensional situation, but only as they impinge on the beleaguered Marines, and then only from their viewpoint.

Hammel interviewed more than 200 Marines concerning their experiences in Lebanon. He received the full cooperation of the Marine Corps, and although he deals sympathetically with the Corps, he sharply criticizes the U.S. State Department, the U.S. Defense Department, and the press corps for their actions in Beirut.

Veteran Infantry commanders will

relate to the difficulties the Marines experienced with tactical restraints and rules of engagement. Junior leaders can profit from the descriptions of small unit leadership in an environment characterized by imprecise definitions of objectives and long periods of inertia ruptured by frenetic activity. Many will be surprised by the intensity of combat with the Moslem militia that the Marines experienced during their deployment.

The reader turns from this work with the hope that the quality of our nation's strategic planning matches the characteristic excellence of courage and resolve demonstrated by the officers and men who serve on the cutting edge of foreign policy.

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**TEN DAYS TO DESTINY**, By G.C. Kiriakopoulos (Franklin Watts, 1985. 408 Pages. \$18.95). Reviewed by Major John C. Edgecomb, United States Army.

As a result of his extensive travels, research, and personal interviews, the author produces what could be one of the finest documented accounts of any World War II battle. He presents a vivid portrayal of the actual fighting and battles on Crete in 1941 and adds the concerns, considerations, and decisions of the higher commands on both sides. It is, in short, a meticulous accounting of the battle for Crete.



The author's in-depth and detailed accounting of the battle thoroughly examines and addresses the German, British, Greek, and Cretan civilian involvement in the campaign. His is a well written and extensively documented book that develops quickly and holds a reader's interest throughout. It is worthy of the Infantryman's time and attention.

**NOT OVER BY CHRISTMAS: NATO'S CENTRAL FRONT IN WORLD WAR III**, by E. Dinter and P. Griffith (Hippocrene Books, 1983. 178 Pages. \$17.95). Reviewed by Major General Albert H. Smith, Jr., United States Army Retired.

Elmer Dinter, a colonel in the West German Army, and Paddy Griffith, a lecturer in military history at the Royal Military Academy, Sandhurst, are convinced that any future war in central Europe can be "finished quickly and by conventional means." Then, they continue, the "boys could be home by Christmas." But they also feel that a long war is in many ways the most likely of all possible scenarios, given the present state of preparations on both sides.

The authors minimize the probability of nuclear and chemical war, and, as a result, propose certain doctrinal and organizational changes they feel would improve NATO's conventional battle

posture. To them, NATO "must arm herself with enough conventional forces to remove the fear of defeat on the ground" and must create "a true operational reserve that would be capable of launching a counter-offensive of sufficient strength to regain freedom of action. That reserve is lacking at the present.

A large number of maps, charts, and diagrams do much to improve the book's value to those individuals involved in the development of war plans and operational concepts. It should also appeal to history buffs and to military analysts.

**GUERRILLA: COLONEL VON LETTOW-VORBECK AND GERMANY'S EAST AFRICAN EMPIRE**, by Edwin P. Hoyt (Macmillan, 1980. 246 Pages). Reviewed by Captain Harold E. Raugh, Jr., United States Army.

At the end of World War I, only one German force remained undefeated — that of Major General Paul von Lettow-Vorbeck in German East Africa. In this fast-paced book, Edwin Hoyt tells the enthralling story of how the Germans conducted the first successful guerilla campaign in history.

With no more than 3,000 German and 11,000 native soldiers, von Lettow-Vorbeck successfully diverted more than

300,000 much-needed British and Imperial troops, plus 130 generals, from the Western Front. His campaign also drained the British treasury of billions of pounds sterling, at no cost to the Kaiser's government.

How von Lettow-Vorbeck kept his force together in the jungle with no monetary or logistical support from Germany is a story of charismatic leadership, self-discipline, and an unparalleled devotion to duty. His actions provide a superb example of altruistic leadership that all Infantry leaders would do well to emulate.

Unfortunately there are no photographs, illustrations, or maps in the book, any of which would have improved its quality. An annotated bibliography does provide additional reference for the reader.

## RECENT AND RECOMMENDED

**THE UNKNOWN SERVICEMAN OF THE VIETNAM ERA**, by The Center for Military History. USGPO, 1985. 38 Pages. S/N 008-029-00138-1. \$2.50.

**DICTIONARY OF BASIC MILITARY TERMS — A SOVIET VIEW**. Published under the auspices of the U.S. Air Force. Reprint of the 1982 Edition. USGPO, 1985. 200 Pages. S/N 008-070-00360-1. \$6.50, Softbound.

**BOLDNESS BE MY FRIEND**. By Richard Pape. St. Martin's Press, 1985. 422 Pages. \$11.95.

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# **From The Editor**

## **1985 INDEX**

**We still have on hand a number of copies of our 1985 index. As we mentioned in our January-February 1986 issue, we prepare the index separately and make it available free of charge to anyone who requests a copy. Please address your request to Editor, INFANTRY Magazine, Box 2005, Fort Benning, GA 31905-0605, or call us at one of the telephone numbers listed on Page 1 of any recent issue of the magazine.**

## **SWAP SHOP**

**In our January-February 1986 issue, we reinstituted our Swap Shop department and published in that issue two Swap Shop items. We had another such item in our March-April 1986 issue.**

**This department is designed to allow infantrymen everywhere to share practical ideas they have used successfully in doing their jobs. These are short items and we use them as fillers whenever we have room for them—or occasionally we will make room for one.**

**So if you have an idea you want to share with your fellow infantrymen, send it in. Remember that this is your department, and it won't work without your help.**

## **SCHEDULES**

**During the past several months we have received a number of requests for information about the various classes taught at the Infantry School—start dates, for example, and end dates for such courses as OCS, ANCOC, IOBC, and IOAC.**

**We will be happy to furnish, on request, schedule information on particular courses. Call or write us and we'll get the information to you as fast as we can.**



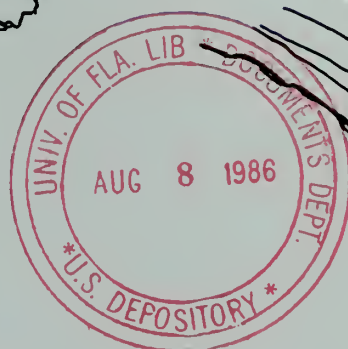
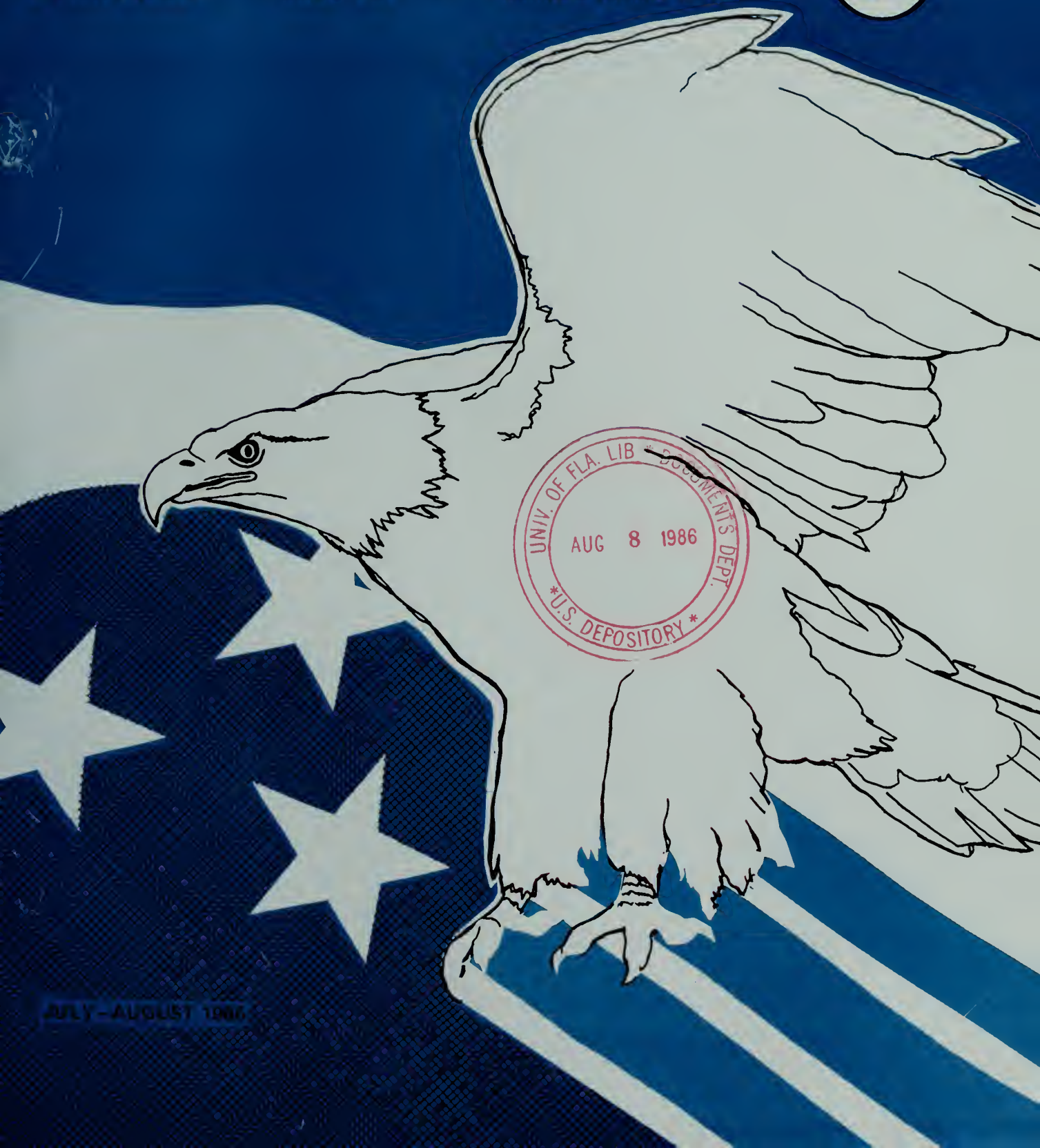


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A country and government such as ours are worth fighting for, and dying for, if need be. (*William T. Sherman: Memoirs, 1875*)





# USAIS

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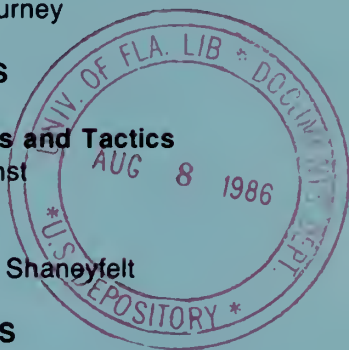
CSM David J. Kloss

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# Commandant's NOTE



**Major General Edwin H. Burba, Jr.**  
Chief of Infantry

*The Bradley Infantry Fighting Vehicle has been under attack by certain elements of the Congress and the media. I wrote this paper some time ago to clarify my own thoughts as I addressed these attacks in public and private forums. I've used it in testimony before Congress and in informing influential supporters and detractors alike. Parts of it were used in a much shorter article I prepared for the Armed Forces Journal several months ago.*

*I am reprinting it here in its entirety for several purposes: First,*

*I am hopeful that the field can use it as a simplified approach to tactically employing this marvelous fighting vehicle. Second, I am hopeful that it can be used to inform our soldiers that we have the finest fighting vehicle in the world today, and one that will survive on the high technology battlefield better than any other. Finally, I am hopeful that it will stimulate responses to the Infantry School from soldiers, NCOs and officers as we continue our dialogue in how to fight the Bradley force. We look forward to hearing from you.*

Defeat of an enemy force, superior in numbers and equipped with weapons of equivalent technology, must be accomplished through maneuver warfare. The essence of such warfare embraces the avoidance of major frontal engagements where enemy combat power prevails and the initiation of friendly attacks along lines of least expectation and resistance where the enemy's combat power is emasculated and ours is substantially enhanced. At the lowest levels, these tactics are referred to as fire and movement, at higher levels as firepower and maneuver, and at the highest levels as maneuver warfare.

To accomplish these indirect tactics, infantry-heavy forces fix or at least control the movement of enemy first-echelon forces while artillery, air, and engineer units support them and freeze second-echelon forces through fire interdiction and barrier operations. While the enemy's attention is on these fixing, interdiction, and barrier actions, tank-heavy units, accompanied by protecting infantry, attack his vulnerable flanks and rear before he can react. Such operations unhinge enemy tactical integrity and provide opportunities for attack deep in the enemy's rear by division and corps constituted operational reserves.

A more precise snapshot of the maneuver aspects of these combined arms operations displays enemy target acquisition and weapons systems, offensive formations, and defensive entrenchments facing in one direction, and friendly attacks emanating from a different direction, normally the flank or rear. Such attacks avoid the enemy's superior strength while concentrating friendly strength against his weaknesses. Flank and rear attacks quickly lead to the destruction or

paralysis of the enemy's command posts and his artillery, aviation, engineer, and logistical support units. Without having taken on the enemy's superior combat force, friendly forces defeat him from within by desynchronizing his command and control and depriving his combat forces of critical firepower, maneuver and logistical support.

As indicated, there are two maneuver force underpinnings that allow these tactics to succeed. First, the enemy's first-echelon force movement must be fixed or at least controlled. Secondly, an agile maneuver force must be able to react more quickly than the enemy. The tank is clearly the preeminent weapons and mobility system for the maneuver force, and it has always performed its role well. The weapons of the infantry's M113 carrier and its organic troops have neither the range nor the lethality to perform the fixing function. Previously, tanks had to be used to execute this role and, thus, were deprived of the role that they do best — maneuver. When tanks were previously used to fix the enemy, our forces were deprived of adequate maneuver elements and were forced into attrition warfare. The enemy's superior numbers normally presented him victory. Tank-heavy forces are too precious to be used as the predominant fixing force.

With the Bradley Infantry Fighting Vehicle, the infantry now has the vehicle it needs to fix the enemy, freeing tank-heavy forces for maneuver and, thus, providing the Army with the opportunity to conduct maneuver warfare. Not only can the Bradley's TOW missiles destroy enemy tanks, its 25mm Bushmaster can destroy or



suppress its Soviet counterpart, the BMP, and its coaxial machinegun can destroy or suppress dismounted infantry. The range of these Bradley weapons systems also allows the infantry to occupy long range, dispersed, mutually supporting positions, arrayed in depth, on flanks along likely avenues of approach throughout the battle area. These positions deny the enemy complete use of his combat power by avoiding the directional orientation of his target acquisition equipment and weapons systems and brings the majority of our forces' combat power to bear on his weaknesses, the sides of his tanks and the flanks of his formations.

There are other premiums. The range of these weapons systems allows an extension of the umbilical cord between the infantry vehicles and the dismount elements. Previously, the location of both the vehicles and the dismount elements was a compromise between positions that would optimize each element. The positions completely favored neither the dismount elements nor the vehicles. Now, with the longer range weapons, vehicle dash speed, and improved armament and optics, both the vehicles and the dismounted elements can be placed in optimized positions. Furthermore, such positional flexibility allows dismounted infantry the opportunity for infiltration and ambush attacks and reverse slope and checkerboard defenses, "misdirection" operations implicit in maneuver defenses.

Once the enemy force's movement is either fixed or controlled, a tank-heavy force can quickly maneuver into its flanks and rear. The Bradley infantry also has important roles with the tanks during this maneuver. It performs reconnaissance and counterreconnaissance, clears restricted terrain, protects at night, and breaches obstacles. Further, it mops up bypassed enemy, seizes key terrain to maintain the momentum of the tank attack, and, importantly, destroys and suppresses enemy antitank weapons. Tanks alone are unable to perform these roles. The M113 armored personnel carrier's lack of cross-country speed and agility prevents it from accompanying the tanks, and its lack of mounted firepower to destroy enemy tanks and fighting vehicles compromises the maneuver force. Bradley infantry can effectively fight tanks, BMPs, and other armored vehicles, thus allowing brigade and battalion commanders to mass tanks for maneuver. As can be seen, Bradley infantry is as critical to the maneuver element as it is to the fixing force.

Concern has been expressed that Bradley dismounted strength has been reduced to unacceptable levels that prevent it from performing the roles just discussed. Even when the M113 personnel carrier was structured with an 11-man squad, there were only five maneuver soldiers. Five members of the squad were dismounted to perform fire support because the gunner with the .50 caliber machinegun could not perform that role without substantial reinforcement. The current Bradley squad with its six dismount soldiers dedicated to maneuver can perform infantry dismount roles as well as, if not better than, the five in the larger M113 infantry squad.

Other concerns have been expressed relative to the Bradley's capability to stay up with tanks during maneuver because of its light armor protection. The F15 aircraft is highly vulnerable to any ordinance that hits it; however, it derives its survivability from its speed, agility, and tactical employment. The same situation applies to the Bradley. Against light resistance by an enemy force such as a mechanized or tank platoon (3 or 4 vehicles) that is not dug in and does not possess combined arms support, the Bradley can fight in the same combat formation with the tank.

During a medium resistance situation, where the friendly force is faced with a company-sized element (10 to 15 vehicles) with combined arms elements supporting and dismounted elements in a hastily dug position, the Bradley is able to perform overwatch missions,

suppressing and destroying targets to allow the tanks to maneuver to break the integrity of the enemy's tactical dispositions. Once this is accomplished, the Bradleys can then join the tanks and continue the fight in the same combat formation. Against heavy resistance, where a battalion-sized enemy force (40 to 50 vehicles) is echeloned in depth, with security to the front, with combined arms support, and with all vehicles and infantry in dug-in positions, both the Bradley and the tanks will go into overwatch positions. From these positions, the tanks and Bradleys destroy and suppress the enemy to allow dismounted infantry from the Bradleys to move forward to conduct close overwatch and assault breaching missions. Once the assault breach is accomplished, tanks can move forward, exploit the breach, hold the shoulders, and allow follow-on tank and Bradley combat formations to continue the attack.

In a battalion task force area, many independent but related fire-fights occur. In some of these fights, Bradleys will be fighting within the same battle positions or formations as tanks. In other situations, they will be in long overwatch with or without the tanks. In each situation, conditions are dynamic and the Bradleys move forward or remain in defilade as the situation dictates. This is the nature of combined arms tactics that are subscribed to by infantry and tank forces throughout the world. Importantly, the Bradley can perform in all situations relatively impervious to artillery fire because its ammunition and POL are stored internally. Externally stored fuel and ammunition might increase survivability somewhat from direct fire interdictions but would degrade the vehicle's enormously important firepower and mobility functions considerably during enemy artillery engagements, which will be formidable and frequently experienced.

To capsulize, the defeat of an overwhelming echeloned force must be accomplished through maneuver warfare which, in conjunction with combined arms fire and barrier support, requires both a fixing force and a maneuvering force. Infantry-heavy forces must perform the fixing functions to free tanks for the maneuver elements. These fixing forces will also contain some tanks to perform reconnaissances in force, spoiling attacks, and local counterattacks. The maneuver element, consisting principally of tanks, will also contain some Bradleys to perform reconnaissance, security, clearing, breaching, and suppression missions. The M113 carrier force can neither fix the enemy nor perform the infantry functions required during maneuver because of its inferior firepower and mobility characteristics. The Bradley can perform both roles and perform them well.

The wisdom of the Bradley design has been validated in 19 high resolution wargames. Fighting as a member of a combined arms task force against overwhelming 3 to 1 odds (motorized regiment), in a full range of mission and terrain conditions, the Bradley has increased measures of total force effectiveness up to 100 percent over that of an M113-equipped force, the precise measure depending on the scenario. Importantly, the Bradley's contribution to the fight was over 200 percent that of the M113 in all cases. The Bradley force sustained up to 25 percent fewer casualties to indirect fire than the M113 force and reduced total task force personnel casualties by almost 20 percent in most cases. These increased capabilities allow Bradley forces to fix the enemy, freeing tanks and other Bradleys to seize the initiative through maneuver and shock action — roles that are the basic underpinnings of maneuver warfare doctrine.

In short, the Bradley, with its optimized firepower and mobility, working synergistically with the remainder of the combined arms force in the execution of a doctrine for which the force was designed, allows that force to win. Without the Bradley, the force frequently loses.



# INFANTRY LETTERS



## PLATOON TEAMS

In regard to Captain Joseph K. Miller's "The Platoon Team" (INFANTRY, January-February 1986, p. 14), I would like to make a couple of observations.

First, armored cavalry officers have long appreciated the merits of combined arms operations at platoon level. Until recently, all armored cavalry platoons contained a mix of scouts and tanks, which allowed for the combination of maneuver, firepower, and protection that Captain Miller cites in his article. Even under Division 86, regimental armored cavalry troops retain a mix of scouts and tanks to provide these same advantages. The main problem, that of leadership, is both the key to the successful operation of any platoon and a problem that will not be practical to overcome at platoon level. It is difficult enough to habitually attach companies and platoons to form task forces and company teams, let alone expand this to platoon teams.

Short of developing a "combined arms" branch composed of tankers and mechanized infantrymen, the creation of platoon teams will generally bring more problems than benefits.

If a commander is determined, however, to create platoon teams, it would be more effective to keep pairs of like vehicles together. If it is necessary to lead with tanks, lead with a pair of tanks, not just the platoon sergeant's former wingman, who is often the junior track commander in the tank platoon. What happens, for example, if the lead tank becomes mired, throws a track, or hits a mine and suffers loss of mobility? With unlike vehicles, the overwatching tank must expose itself to assist in recovery, weakening the available overwatching fires.

Finally, in the example Captain Miller cites, unless the overwatching tank platoon was asleep, the vehicles hit by main gun rounds less than seven seconds

into the engagement would have been enemy tanks and not Bradleys.

In spite of my objections to the creation of platoon teams as envisioned by Captain Miller, I am pleased to find articles on combined arms operations appearing as often as they do in your magazine.

EDWARD N. ROUSE, JR.  
CPT, Armor  
Watervliet, New York

## MARKSMANSHIP

I agree with S.L. Walsh of the Marine Corps when he recommends that the Army return to a known-distance basic marksmanship program to train each soldier in fundamental marksmanship principles (INFANTRY, January-February 1986, p. 4). I have served in both the Marines and the Army, and my experience with the Marine marksmanship program was vastly superior to that with Army marksmanship training.

I recall that during Marine basic training, the recruits underwent a full two weeks of marksmanship training. One week consisted of classes and "snapping in"—the painful process of practicing stable firing positions in the kneeling, sitting, off-hand, and prone positions. The second week was live-fire practice on known-distance targets up to 500 yards away. The training culminated in a qualification day—shooting for score. No one can go through Marine Corps marksmanship training and not gain an appreciation of what a rifle can do at long range.

On the other hand, during my Army

ROTC advanced camp experience at Fort Bragg (supposedly a basic training equivalent for cadets), we trained and qualified with the rifle in a matter of *three days*. There was very little snapping-in, no dry-fire practice, and classes were rushed and unprofessional. Range coaches were silent spectators—not training aids to the soldier. The range consisted of silhouette targets from about 20 to 200 yards away, which were designed to "pop up" from dense foliage. This was intended to test the soldier's "target acquisition" ability. Unfortunately, many of these targets failed to pop up or were obstructed by the vegetation around them. Many cadets were given minimal qualifying scores by "nice guy" coaches just to get them off the range. In short, it was a disgrace.

In a way, I can understand the Army's concern for training soldiers under realistic conditions on the range. But such training is inappropriate for initial entry training. Skills such as target acquisition and engagement of targets during reduced visibility are important skills for the combat soldier. But for the basic trainee (or his ROTC counterpart) it is far more important to stick to the basics of marksmanship as the Marines do.

In my nine years of military service I have qualified four times as a rifle expert (three times in the Marines and once in the Army Reserve). Any proficiency that I have with an M16 I attribute to my Marine Corps training. The Army training has been, at best, a "going through the motions" proposition.

EDWARD PASCUCCI  
Syracuse, New York

**We welcome letters from our readers and print as many of them as we can. Sometimes it takes a while before we find room. But keep writing on topics of interest to our readers, and we'll do our best to publish your letters, sooner or later.**

## FROM THE OPPOSITION

Since Captain Wingo (INFANTRY, May-June 1985, p. 42, and March-April 1986, p. 7) and Captain Cormier and Ser-



geant Holmes (November-December 1985, p. 5) were allowed to suggest and support an extended FTX for Reserve Component (RC) units in your magazine, I believe your readers should also be allowed to digest the opinions of the opposition.

It is true, as Captain Wingo suggests, that some combat units will spend 10 days in the field, with some naturally spending more and some much less. But it is more a certainty that all combat units will experience, on a more frequent basis, the luxurious feeling of being pulled out of the field and then the apprehension of considering their repeated return to the field.

Two trips to the field create a far more realistic environment with far more training benefits. Realism means that the officers and NCOs are going to have to prepare for operations more than just once, and few would argue that a little more planning and work is involved when the troops are moved from the cantonment area than when they are moved from one spot in the field to another. And then there is the added leadership challenge of being able to pump the troops up for yet another go in the field after an enjoyable and much deserved R&R period.

Middle weekend breaks have really been bad-mouthed, particularly by Active Army officers who can't comprehend RC units' taking a break in the middle of their annual training period. (Active duty units and their commanders would be a trifle reluctant, I'm sure, to give up their 30-day leaves, free weekends, and training and athletic holidays for a 365-day stretch in the field.) The time spent away from training builds a sense of unity and morale in all armed forces personnel that is hardly equalled in the field, but it produces better field work.

These breaks are extremely beneficial to the leaders of RC units, who have time to pause and reflect upon the initial stint in the field and so to capitalize later on their earlier and good decisions, and to correct the errors that were recognized. And then, more important, the troops can greatly benefit and their morale can remain high, after their conscientious leaders have taken time to prepare themselves adequately for the second trip to the field with meticulous study and planning,

thorough reconnaissances and repetitious TEWTs.

Two report cards are better than one. Tactical and maintenance evaluations are more effective if the responsible soldiers and their leaders are able to correct any deficiencies in a matter of days instead of being forced to wait until another training period. While one trip to the field may give an operator, and possibly a neglectful first-line supervisor, a failing grade, a second trip provides them with an opportunity to achieve a passing score.

It's just too easy for leaders to inform their troops that when they're back in from the field, they're back for good. That's not realism. Annual training is, for RC units, the most important training period. Too many deficiencies, beyond on-the-spot corrections, will be noted at the end of an extended FTX to have to wait until another year to realize correct applications and impressions.

Middle weekends at annual training should be considered for their training value and not looked upon merely as an RC vacation. That weekend can divide two intense training opportunities, and the training can't help improving the second time around as a result of the middle weekend break. Realism means that units will go to the field to fight more than just once. Middle weekends allow us to train for that reality.

MARSHALL K. MADDUX

PSG

Nebraska Army National Guard  
Falls City, Nebraska

## NEED FOR SYMBOLS

The year of 1985 was one of incredible change for the 7th Infantry Division (Light) at Fort Ord. It was a year of conversion and of growth—growth not in numbers but in experience and potential.

This change was not limited to a new title and a new modified table of organization and equipment. These were simply the mechanics of conversion. The real change was in the attitude, the spirit, and the will to win of the Light Infantryman. The Light Fighter has become an elite warrior through a demanding developmental process in which equipment is

only a tool. It is the human element—the privates, NCOs, and officers—that has made the light infantry a success. And a success it indisputably is!

The light infantry fills a critical gap in our nation's defense network that must meet today's geopolitical situation. The 7th ID(L) can now deploy to a situation that is too large for a Ranger battalion to handle but that must be met with a faster response than a larger, heavier division such as the 82d Airborne or the 101st Air Assault Divisions can offer. The Light Fighters are prepared and ready to go, now.

The hard work and sacrifice of every soldier—from COHORT private to commanding general—who has brought the division to this state of readiness now deserves to be recognized and rewarded with some special symbols to show that they are of a special make—elite soldiers.

The first method of expression should be a unique beret—brown to symbolize the dusty hills of Hunter-Liggett, the sandy shores of North Africa, or perhaps the murky swamps of Central America.

Although a beret may not technically improve fighting ability, it does symbolize pride in a unit. (That can be confirmed by anyone foolhardy enough to try to remove one from the head of a soldier belonging to the Rangers, the paratroops, or the Special Forces.)

The second symbol should be a light infantry tab, to be incorporated into the division patch (see sketch). The 7th ID(L) bears little resemblance to the previous 7th Infantry Division, and this change





should be reflected in an updated divisional shoulder patch.

The Light Fighters of the division need some symbols. In spite of the active programs to encourage soldiers to attend Ranger, Air Assault, and other schools, a relatively small percentage of privates and junior enlisted men are actually given an opportunity to attend. And it is these very soldiers who project the image of the unit and these who want the symbols that can display their unit pride to the world. The 7th ID(L) is, after all, the prototype, original light infantry division of the Army!

General John A. Wickham, the U.S. Army Chief of Staff, said in his White Paper on the light infantry division that "accoutrements to foster the elite image of the soldiers in the light infantry division also must be designed and provided."

By authorizing these symbols, the Army will be recognizing the Light Fighters of the division for the commitment, the desire, and the willingness to fight and win that they have shown in this year of conversion. The symbols would be a multiplier of soldier power!

The cost of these symbols would be minuscule, especially when compared to the millions of dollars spent on other equipment, but the return in unit pride, morale, and esprit de corps would be incalculable.

VAN R. DODD  
1LT, Infantry  
Fort Ord, California

## WOMEN AND THE MILITARY

*Minerva: Quarterly Report on Women and the Military*, in its fourth year of publication, wishes to consider manuscripts bearing on women's military and paramilitary activities in any part of the world in any time period.

Also of interest are papers dealing with the activities of female civilian support personnel—such as Red Cross workers—and of military wives. *Minerva* also publishes analytic and opinion pieces concerning gender-related military issues.

Please address correspondence to me

at 1101 S. Arlington Ridge Road, #210, Arlington, VA 22202, or call (703) 892-4388.

DR. LINDA GRANT De PAUW  
Editor and Publisher

## NIGHT ATTACK DOCTRINE

Recently, I had an opportunity to conduct an extensive literature search and subsequently to review a number of technical reports and articles from military periodicals on the subject of night attacks. I carried out this task with considerable interest because a few years ago, as a light infantry company commander, I was always looking for a dismounted night attack procedure that I thought would work in combat. I wasn't convinced that the doctrinal limited visibility attack described in FM 7-10, The Infantry Company, had much chance of succeeding in combat.

The present doctrinal night attack requires that too many cold, wet, apprehensive soldiers, acting as guides, remain for a long period of time close to the objective. Additionally, it is unlikely that all of the lateral movement, as squads and then individuals move forward and fan out inside the enemy's wire to occupy the probable line of departure (PLD), will go undetected by even a half-alert defender. Finally, the security advantage gained by communicating with wire does not seem to come even close to outweighing the troubles in using it.

The latest infantry company level doctrine, FC 7-14, Light Infantry Company Operations and ARTEP Mission Training Plan, dated 19 February 1985, provides company commanders with fundamental concepts and principles of how to fight light infantry. The offense chapter addresses six types of attack. It does not, however, address limited visibility or night attack, and the PLD does not appear on its list of control measures.

During my research, I came across two articles in particular, both from INFANTRY's May-June 1977 issue, that should be extremely valuable to the light infantry leaders of today:

In "A Lesson from the Past" (page 31), Captain Robert R. Harper, Jr., iden-

tifies and discusses the unit level keys to the successful night attacks employed by units of the 104th Infantry Division during World War II. During the period October 1944 to May 1945, the 104th Division conducted more than 100 successful night attacks.

In "New/Old Solution" (page 33), Captain Michael T. Dawson identifies and discusses a number of shortcomings he saw in the then-existing dismounted doctrinal night attack. He then described how a dismounted night attack would be conducted today by a unit using the night attack concepts of the 104th Division.

I recommend that you reprint these two articles. You would be doing a great service to the light infantry soldiers of the U.S. Army.

ROBERT G. SIMMONS  
CPT, Infantry  
U.S. Army Training Board  
Fort Monroe, Virginia

*EDITOR'S NOTE: Although we cannot reprint the two articles, we are pleased to provide a reference to them here. (Copies are available in most libraries.) In addition, we have an article on an illuminated night attack coming up soon, which we hope will be helpful.*

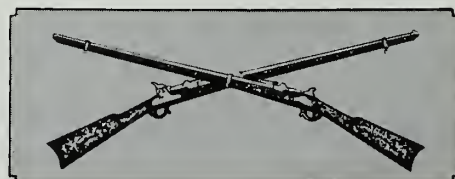
## REUNION SHAEF

A year ago we began looking for veterans of Supreme Headquarters Allied Expeditionary Force (SHAEF) and, to date, have found 375 out of a possible 5,000 still living.

Our first reunion will be held 12-14 September 1986 in St. Louis.

Anyone who is interested in more information may write to me at the SHAEF Veterans Association, P.O. Box 42, Fair Haven, NJ 07701, or call me at (201) 842-4206.

CHARLES ALLEN PETERSEN





# INFANTRY NEWS



THE DIRECTOR OF Combat Developments has furnished the following news items:

• **Battlefield Management System (BMS).** A Civil War quote, attributed by some historians to the Confederate General Nathan Bedford Forrest—"git thar fustest with the mostest"—still has relevance as we near the 21st century. A developing Army system called the Battlefield Management System, or BMS, will permit a commander to turn within an enemy's command and control cycle and to "git thar fustest with the mostest."

BMS will link the command elements of a maneuver force to each other and to their supporting elements—fire support, intelligence, logistics, administration, and the like—by an automated digital data network to improve the commander's ability to plan a battle, evaluate the available courses of action, and assure him that his orders are being implemented. (See *INFANTRY*, March-April 1986, pp. 9-10.)

The key to the development of the BMS is the automation of certain critical functions to save the commander time and help him make decisions. Accordingly, the Infantry School is now conducting an analysis to determine which tasks and functions have potential for automation. A field evaluation, done in conjunction with the Combined Arms Center, will be held to validate the requirement. The focus for the infantry will be on dismounted forces and target acquisition and on the hand-off requirements for Echo Company.

Automated battle management is possible because of the digital computer and its ability to send vast amounts of readily understood data in forms that apply to each level of command. BMS will use interactive hand-held displays, digitized maps and graphics, and touch-sensitive screens linked to target acquisition and navigation devices. It will be manportable so that a commander will not be tied to

a particular place or vehicle. In mounted operations, BMS will complement a vehicle's weapon systems.

To make the best possible use of BMS, significant changes may be required in doctrine, organization, training, and materiel developments.

• **Equipment Items.** The Infantry School is presently pursuing the development of high quality clothing and individual equipment items for the individual infantryman. This is a radical departure from the previous approach that looked at equipping all soldiers with identical items. Two examples of the new developments are a combat glove and an intermediate sleep system.

The proposed combat glove is intended for issue as a supplement to the present light duty glove for close combat forces. It must provide protection in either dry cold or wet cold battlefield environments and under conditions that require better durability and dexterity than the current light duty glove offers. The proposed glove must provide protection in a range of temperatures from plus 60 degrees Fahrenheit to zero degrees Fahrenheit.

The intermediate sleep system is proposed as a one-for-one replacement for the present intermediate cold sleeping bag. It will be constructed using state-of-the-art advanced designs that benefit from recent improvements in synthetic materials. A tentative basis of issue includes all close combat forces that operate in basic cold regions (Climatic Zones III-VI).

• **BOSS.** The Infantry School wants a battalion commander to be able to "see over the next hill" with real time imagery. In short, this means he needs an unmanned aerial vehicle (UAV) equipped with a television camera to operate over the enemy's lines and send back to him live television pictures, via a data link, of events in his area of influence.

This UAV, called the battalion operated surveillance system (BOSS), will be

a small, semi-recoverable, low cost device. Its electronics will consist mainly of off-the-shelf non-developmental items such as a video camera. Once the BOSS is fielded, it should prove of great assistance to a battalion commander on the modern battlefield.

• **CIBT.** The Infantry School is embarking on a series of force development tests and experimentations (FDTE) called the contributions of infantry to the battle test (CIBT) to investigate and document those contributions. The tests will be conducted by the Army's Combat Developments Experimentation Center at Fort Hunter Liggett, California.

The first phase of the CIBT is scheduled to take place this fall and will examine mechanized infantry contributions to the combined arms team. Multiple repetitions of movement to contact and attack scenarios will be conducted during the day and at night by tank company and company team forces against an appropriate threat motorized rifle unit. The battlefield environment will be as realistic as test methodology and troop safety will permit. During the exercises, the friendly force will meet obstacles that must be breached and wooded areas that must be traversed.

The exercises will focus on any advantages that accrue to a combined arms team as a result of the infantry performance in those situations as well as in close and long overwatch roles. In addition, the FDTE will investigate any differences in command and control between a pure tank force and a combined arms force, the relative abilities of each to generate combat information, and any differences in the way those forces employ, coordinate, and concentrate direct and indirect fires.

Phase I record trials will run from about 1 October through 14 November 1986, with a test report to be published early in February 1987.

• **XM4 Carbine.** The XM4 is a pro-



posed new weapon that will replace selected .45 caliber and 9mm pistols, all submachineguns, and selected 5.56mm rifles carried by unit leaders, crew-served weapon gunners, vehicle crewmen, and radio operators. (See **INFANTRY**, January-February 1986, page 9.)

The XM4 is a compact, lightweight weapon designed for personal protection against dismounted targets at ranges out to 300 meters. It will use the same ammunition as the M16A2 rifle, and some 75 percent of its parts will be common to that rifle. It will feature a three-round burst mechanism, a telescoping buttstock, and a shortened barrel that will have the same twist as the M16A2 rifle. It will be 30.2 inches in length and will weigh 5.9 pounds; its barrel will be 14.5 inches long.

• **SCORES.** This scenario oriented recurring evaluation system (SCORES) gives the combat development community an evaluation technique and a framework for identifying needed improvements and for addressing questions raised about organization, doctrine, training, and materiel.

A TRADOC standard scenario consists of general, operational, and dynamic scenarios. The general scenario depicts an area, threat and friendly forces, and the situation leading to the introduction of U.S. forces into that area. The operational scenario presents the initial position of the forces in the area and the operational plans of both friendly and threat forces. The dynamic scenario relates the day-by-day locations, task organizations, and battle descriptions; it also contains gains and losses of personnel and equipment and the subsequent analysis of that data.

All TRADOC combat development studies or analyses will use TRADOC standard scenarios. These scenarios are required for cost and operational effectiveness analyses (COEA), mission area analyses and other applicable combat development studies, development and review of TOE and related organizational documents, priority and trade-off analyses, system program reviews, and force modernization concepts and doctrine development.

THE WIDESPREAD USE OF lasers in training has increased the potential for injury to soldiers. Accordingly, all soldiers who handle laser devices must know how a laser operates and how laser energy can produce injuries.

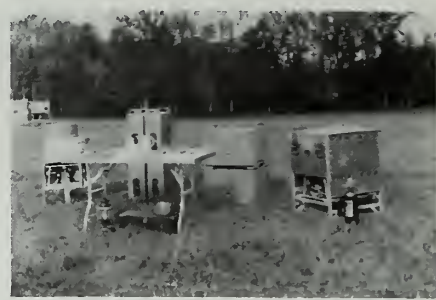
Field military lasers are used mainly as rangefinders, target designators, and target illuminators. Direct beam hazards exist when soldiers are within the laser beam, either at the target or between the target and the laser, or even well beyond the target if a backstop is not being used. Binoculars, a battery commander's scope, or a telescopic sight in an armored vehicle all increase the danger because, in effect, the magnifying power of the lenses in those devices bring the viewer closer to the laser.

Reflective beam hazards occur when a reflecting surface is flat enough to maintain the high parallelism of the primary beam. Thus, soldiers should use caution when they are around windows in built-up areas, glass surfaces on combat vehicles, or still ponds of water.

Most laser safety measures are common sense procedures:

- Personnel should keep out of the direct beam path and watch for any reflected beams from other areas.
- Lasers should be treated as direct fire, line-of-sight weapons, similar to rifles and machineguns.
- Lasers should always be pointed downrange, especially when batteries are installed.
- Batteries should be disconnected when a laser device is not being used and stored separately from the device itself.
- Safety switches and safeguard covers should be kept on the laser devices when they are not in use.
- The devices, when not being used, should be properly secured.
- Most important, soldiers should always consider laser devices dangerous, for invisible bullets can be as dangerous as the real thing.

A TEST TEAM FROM THE Army's Combat System Test Activity at Aberdeen Proving Ground recently completed first article/initial production testing (FA/IPT) of the company level field feeding kitchen (CLFFK).



The CLFFK and its components.

The system is designed to support company sized units when they operate either without field kitchens or from dispersed field locations where centralized field feeding support is not available. It provides sufficient water, beverages, equipment, and fuel for the preparation and serving of 200 complete hot T-ration meals within two-and-a-half hours. It can be operated by one cook.

The system also includes remote food carriers (RFCs), which can be used to transport enough T-rations to feed 24 soldiers at remote sites.

The testing program included fifteen 100-mile road marches, low temperature environmental conditioning of the RFC, and other factors. More than 400 military and civilian personnel assisted the test crew on two occasions by consuming T-ration meals.

The CLFFK can be transported on the HMMWV, the CUCV, or a five-ton M-series truck. It can be loaded and unloaded by two soldiers.

THE VIETNAM VETERANS National Medal is now available for purchase from the United States Mint.

The bronze medal, which is available in either a 1.5-inch or a 3-inch diameter size, honors the courage and dedication of the men and women of the United States armed forces who served in the Vietnam conflict.

The 1.5-inch bronze medal, listed as Number 685 on the Mint's medals list, sells for \$2.00 over the counter at the Mint's sales areas in Washington, D.C., Denver, Philadelphia, and San Francisco. It sells for \$2.25 if ordered by mail.

The 3-inch bronze high relief medal, Number 686, sells for \$15.00 over-the-counter, or \$16.00 by mail. A money



order or check made payable to the United States Mint should be directed to the United States Mint (Medals), P.O. Box 500, Philadelphia, PA 19105.

Individuals from another country ordering the medal should make their remittances payable to the United States Mint either by an international money order or a check drawn on a U.S. bank and payable in U.S. currency.

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**SOLDIERS IN BOTH THE** Active Army and the Reserve Components can buy a commercial version of the newly designed physical fitness uniform from main post exchanges and clothing sales stores.

The new warm-up style, unisex uni-



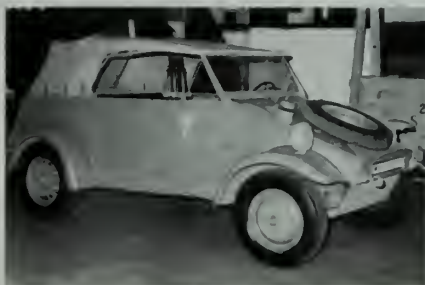
form, which recently received approval for distribution and sale, offers a longer wear life than the current gold-black version. The gray uniform consists of sweat pants (selling for \$12.95), a hooded sweat shirt with pockets and full-length zipper (\$19.95), nylon-lined shorts (\$7.95), and an athletic shirt (\$5.95).

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**THE DIRECTOR OF THE** National Infantry Museum has given us the following news items:

A German *Kubelwagen* has been added to the Museum's World War II section (see accompanying photograph). It was used by the Afrika Corps and has

been restored to its original appearance. It is a Volkswagen Type 82, the original of which was designed at Adolf Hitler's request by the noted automobile engineer, Dr. Ferdinand Porsche. Weighing only half a ton, it was easy to handle and had an excellent cross-country capability, which made it particularly useful in the desert. Eventually, this type vehicle became the most widely used and best known German vehicle of the war period.



**Kubelwagen**

The artillery pieces that are on display outside the main Museum building have been repainted and rustproofed. A new addition to this group is a Russian 85mm antitank gun.

Another outside display, the "Chattahoochee Choo Choo"—the historic narrow gauge railway engine that was used to transport students and others around the post before its retirement in 1946—has had its roof replaced. The engine pulled eight coaches holding a total of 212 passengers and moved them to and from the outlying ranges and training areas. This particular engine is the only known remaining locomotive of the 305 that were produced for the American Expeditionary Force in France in World War I. The observation car that is displayed with the locomotive was built in 1935 to transport distinguished visitors.

The Museum has continued to acquire a number of significant items. For example, the colors of the 331st Infantry Regiment were presented by Lieutenant General (Retired) Robert H. York, a former Fort Benning commander. And a World War II DUKW ("duck," a two-and-a-half ton amphibious truck) was acquired with funds generously supplied by the Fort Benning Officers Wives Club.

Another highly prized addition is a large bronze bust of General Douglas MacArthur that was cast in 1951 by the artist Julius Hackworth. Among the other

items recently acquired are a folding Japanese paratrooper carbine that was used by a Japanese airborne soldier during a combat jump onto Leyte in December 1944, a Japanese flag, a Nambu pistol, a Chinese canteen taken in September 1952 at Baldy Knob in Korea, an M-13 light instrument with its protective cover, medals that belonged to the late General William Simpson, a World War II British paratrooper's smock, a U.S. paratrooper's rope, a Guatemalan paratrooper's qualification badge, books, insignia, photographs, and uniform pieces.

A special exhibit titled "Infantrymen Kill Tanks and Have for Seven Decades" was installed in Infantry Hall for the Infantry Conference that was held in April. The exhibit featured a number of U.S. and foreign antitank weapons.

The Museum's volunteer guides are assembling items for a "Haversack Show and Tell" program for presentation to school children.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905-5273, AUTOVON 835-2958, or commercial 404/545-2958.

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**THE TROOP SUPPORT COMMAND'S** Belvoir Research, Development and Engineering Center has opened a new hotline — AUTOVON 354-5120 — to provide help for soldiers who have questions about supply distribution equipment, water and fuel supply systems, and heaters and air conditioners.

The Logistics Hotline is a 24-hour, seven-day-a-week service. A caller's question is forwarded to the Center's equipment experts for an answer. Follow-up calls and even on-site visits will be made until an acceptable solution is reached.



## Advice to Junior Officers

LIEUTENANT COLONEL PATRICK AUBERT, French Army

In a unit, the arrival of a young officer fresh from school is always a welcome event. It quite often results in various rites of passage and other forms of amusing harassment from the oldtimers.

There is a more serious aspect to this event, however, concerning mainly the commander, and that is the integration of this young man into the "team."

If you are a young officer about to join a unit, there is some advice I would like to offer you.

First, you can be sure that your company commander is very happy to have you. But he is also aware that a certain number of problems, sometimes serious but always awkward, can occur during your integration into the unit, and he will do all he can to prevent them. His immediate interest is to have a unit that functions smoothly, and that means having people in it who work well together without conflicts among themselves. (This does not mean he will not exercise good discipline. After all, he has an image to maintain with his superiors.)

Thus, conscious of your potential as well as your inexperience, he must merge the long-term interest of the Army with the short-term interest of his unit. He must give you the best professional development so that you can work to your maximum potential in the future. It is one of his duties.

In addition to his personal action to guide you from above, he must rely on a

solid experienced NCO to guide you from below. It is exactly this NCO—together with the company first sergeant and other headquarters NCOs—with whom you may come in conflict. Thus, after reporting to your unit, you can expect a certain amount of advice from the commander on how to work with NCOs. In the same way, your company commander will have talked with the NCOs earlier about how to work with you. Don't forget this, because *they* will not, and they will do what he has said.

After this first introduction, you will be on your own as a platoon leader. You will have to navigate among the obstacles, and your attitude alone will determine whether you are accepted or rejected.

### BACKBONE

First, you should understand that the backbone of any army is its corps of NCOs. The commander knows this better than you do and trains them accordingly. What you know in theory, and maybe do not always know very well, your NCOs may have been doing for a long time. As a result, they know how to put the theory into practice better than you do. In executing the commander's orders, and also in doing what is normal for them, the NCOs will offer you a discreet helping hand. Watch for it, and accept it graciously. Listen to them. Take their advice into

account, and don't hide behind your rank to dictate the way things are to be done. Seeking advice from subordinates is never a weakness. On the contrary! The NCOs will consider it a sign of your confidence in them. But never compromise yourself.

In brief, be yourself, sure of your abilities but also conscious of your weaknesses. Don't try to change the world right away; rather seek to understand why things are done in the platoon the way they are. If the answer does not satisfy you, then develop your own solution and be prepared to accept any criticism it may bring. If it is sound, it will be well accepted. In this manner, you will gradually earn the confidence of your NCOs. And it is exactly this confidence that, with time, will permit you to assert yourself and then to prevail.

This is your goal. You will know you have achieved it when you feel you are accepted for yourself and not for your rank. Achieving that goal, which takes longer in peacetime than in wartime, is a cumulative process, the duration of which depends on the circumstances, your personality, and your competence.

As a matter of fact, this period corresponds with your search for your personal style of command in order to establish your authority. This is normal. All of your senior officers had to go through the same process.

This, then, is the way to succeed. But what if you take a contrary attitude: What



if you fail to consider the NCOs' advice? You must then be prepared to navigate in rough seas.

If you stubbornly reject the NCOs' efforts to help, you will reach the point of a total breakdown in communications. In such a circumstance, the NCOs will fall back on the old soldier's philosophy of doing only what is called for in the regulations, but without taking any initiative or questioning any unwise decision you may make.

They will wait. In summary, you will be left alone. They will anxiously watch for your first challenging situation to see what will happen. In most cases, the company commander will know the situation in your platoon. This makes it a negative point for you, even if your youth and inexperience are taken into consideration.

You must therefore change your attitude as soon as possible. If you don't you will find yourself working in an increasingly hostile environment, one that is not openly visible. This makes your simple day-to-day mission much more difficult. You cannot do everything by yourself, and you can no longer afford even the slightest error. Unless you are a magician,

your failures will occur more and more frequently. Pretty soon, whatever happens, only you will be held responsible. Don't turn to your platoon sergeant now, because he is likely to reply coldly, "Sir, you did not tell me."

It is not too late, however. In spite of a rough start, you can still change your attitude and overcome the barrier without major damage. But if you continue, be careful, for you will find yourself labeled by your superiors as well as your peers. Your rating will be low because you are a thorn in the side of the unit. Furthermore, because of the abnormal conditions under which you have been working, you will not receive the on-the-job development you must have as a junior leader. And this deficiency will follow you throughout your career.

You must keep in mind that I have described the process up to the ultimate stage—just before the battalion commander steps in. Such a situation benefits no one, and it must be avoided at any price. Who is responsible for avoiding it? Everybody.

The company commander's actions are of prime importance, of course, because

he has to establish the best conditions for your development. This is one of his main responsibilities. The senior NCOs also have their part to play in that process. But you have to do your part, too—not only as an object but as a subject. That means your integration into the company is also your responsibility.

Let's say you do succeed and go on to become a good officer. In that case, my final piece of advice to you is to remember all of this when you, in your turn, become a company commander responsible for developing junior officers and integrating them into your company.



Lieutenant Colonel Patrick Aubert is the French Liaison Officer to the U.S. Army Infantry School and Center. He has served in various positions in his army and commanded the Infantry Wing at the Canadian Combat Arms School Detachment in Quebec for three years. He is a graduate of the French Staff College and the U.S. Infantry Officer Advanced Course and Airborne Course.

# Army National Guard OCS

## LIEUTENANT COLONEL DUNCAN M. THOMPSON

State officer candidate schools are the primary sources of junior officers to fill vacancies in the Army National Guard. Yet few people know about these schools and how they operate.

Between World Wars I and II, securing officers for the Army National Guard was relatively simple. The requirements for a commission in those days were not as stringent as they are today, and the standards were not established at such a high level of command.

After World War II, during a period of

reorganization for the Army National Guard, officer vacancies were filled mostly by experienced combat veterans and by directly commissioned veteran enlisted men. With the passing years, however, the source of qualified veterans became generally exhausted, and most new officers were commissioned through the 10-Series extension course of the United States Army. Although this was an excellent course of instruction, it did not provide any way of determining the leadership abilities of the individuals enrolled.

And other sources of officers—ROTC, U.S. Army Reserve, officers separated from active duty—contributed an insufficient number of officers to meet the needs of the Army National Guard. (Only the Commonwealth of Massachusetts had a program—the School of the Infantry—designed to produce junior officers for its Army National Guard.)

Efforts began in 1949 to establish state officer candidate schools to teach the military subjects, including the 10-Series course, while at the same time providing



Members of the Ohio Army National Guard in OCS training at Fort Benning.

a resident-type program designed to evaluate the leadership traits of potential officers for the Army National Guard. Although the initial proposal to establish such schools was approved in 1950, only four states (New York, Massachusetts, California, and South Carolina) responded favorably. Their plans were approved and their schools established in 1951. Later on, when Federal funds were secured for the support of schools, the other states eventually agreed to join the program. By 1963, a state OCS had been established in all states except Alaska. That state's OCS began operating in 1976.

These schools are conducted under Section 504, Title 32, United States Code, as amended by Public Law 88-662, dated 3 October 1964. The state officer candidate schools have evolved into state military academies, of which they are now a part. The academies also offer commissioned officer courses and noncommissioned officer courses of the NCO Education System (NCOES).

Presently, Federal funds are provided for two full-time technicians for each academy, some equipment and training aids, and the instructional material prepared at the United States Army Infantry School. Field manuals and subsistence for weekend assemblies and annual training periods are also provided, along with a limited amount of money for facilities.

All other funds come from the individual states.

The programs of instruction for the courses taught at the academies are prepared and published by two Active Army service schools: The U.S. Army Infantry School for OCS and the Sergeants Major Academy for the NCOES courses. All of the programs of instruction are approved by the Commander, U.S. Army Training and Doctrine Command, and the Chief of the National Guard Bureau. The Infantry School oversees the general conduct of the OCSs and grades the student examinations. Active Army major commands conduct annual accreditation inspections of the academies.

## VARIED

State military academies accept students for the officer candidate school program from the Army National Guard, the Army Reserve, and the Active Army. (The students from the Active Army are not commissioned upon graduation; they receive certificates of completion.)

Candidates enter the state OCS program from varied backgrounds. Men and women who hold doctorates in their particular civilian fields and soldiers whose formal education meets only the minimum college education requirements have all

received their gold bars through this program. Candidates with the minimum one year of National Guard military experience have been enrolled alongside students who hold the Combat Infantryman Badge. Attributes common to all successful state OCS candidates, however, are leadership ability and motivation.

The year-long program of the state OCS is operated in three phases.

Phase I consists of a two-week annual training period. (Some state military academies conduct "orientation" OCS training during weekend assemblies immediately before Phase I.) This phase of intensified training is conducted at an Active Army post or at a state Army National Guard training site. A great deal of pressure and stress is created during this initial phase. (If a candidate cannot, or will not, function under the types of pressure and stress to which he is subjected during the initial phase, it is a fair assumption that he will not react calmly to the pressure of a combat situation.)

The basic subjects focus on military leadership, drill and command, and weapons training. Each candidate is rated, graded, prodded, examined, and given every opportunity to prove himself in positions of leadership within the squads, platoons, and companies. The candidate is lectured, counseled, and physically tested. Most of the candidates who drop



out of the state OCS program do so during this first phase.

Phase II of the program, which follows this annual training period, consists of 11 separate weekend training assemblies, one per month for the rest of the year. To continue training the candidate to function under pressure, this phase is also made stressful.

The academic subjects taught are map reading and land navigation, additional weapons of the infantry, combined arms, personnel and logistics, maintenance, and the Battalion Training Management System (BTMS). Also, in this phase, training is conducted in basic operations and tactics, communications and electronics, and military support to civil authorities. The program of instruction meets all of the requirements of the Military Qualification Standards (MQS I) program.

Military leadership training is intensified during this phase, and candidates are constantly rotated within the command positions of the class. Candidates are given tasks and missions to accomplish within certain time constraints, so that they can be constantly evaluated and counseled on their abilities, traits, and accomplishments, as well as on their failures. And through the use of an honor code and a candidate honor council, they are instructed in ethics, discipline, and the

Uniform Code of Military Justice (UCMJ).

Physical training is also a constant factor during the program. All candidates, men and women, must achieve and maintain the same standards—those that are expected of an infantry second lieutenant. Their physical training program includes exercises, terrain marches, rappelling, swimming, and combat oriented field training exercises.

Phase III is conducted during a second two-week annual training period, also at an Active Army or state National Guard facility. In this phase, all of a candidate's training comes together. Everything he has learned and been exposed to in the previous year is put to the test. The training consists of operations and tactics, combined arms operations, and patrolling, and includes two tactics examinations and a lengthy field training exercise. The candidates are expected to demonstrate not only their tactical abilities but also their keen understanding of OPFOR tactics, equipment, weapons, and abilities. In brief, candidates must show that they can perform in a combat environment as infantry second lieutenants, or they do not graduate.

Throughout the state OCS program, candidates are constantly reminded that theirs is a *team effort*. "Cooperate and Graduate" is their guide. Making the best

use of limited assets is constantly stressed. Also, throughout the training year, oral and written communication is taught, performed, and practiced.

The standards of the state military academies are high. The state OCS program is long and difficult, and deviations from the standards are not condoned. Without dedication and persistence, a candidate will not make it to graduation and commissioning.

The sole function of the Army National Guard State OCS program is to qualify soldiers, through an intensive course of leadership evaluation, academic study, and physical training to accept appointments as second lieutenants in the Army National Guard and the United States Army Reserve. State military academies are the most cost effective means of producing second lieutenants for the Reserve Components of the United States Army.



Lieutenant Colonel Duncan M. Thompson is commandant of the Hawaii Military Academy, Hawaii Army National Guard. He received his commission from the Infantry OCS at Fort Benning in 1969 and served two tours in Vietnam. He has also taught tactics to OCS classes at the Alabama Military Academy.

# Preparing for Airborne Training

CAPTAIN DANNY L. GREENE

Confidence and toughness are two traits that leaders must possess if they are to succeed. One of the finest schools available in which to build these fundamental leadership characteristics is the U.S. Army Airborne School at Fort Benning. The

three-week Basic Airborne Course stresses mental and physical toughness and confidence in oneself and one's equipment.

Although a wide variety of officers, enlisted personnel, and cadets attend the course, many of those who volunteer ei-

ther do not complete the course or are turned back as soon as they arrive, for various reasons. As a result, the spaces reserved for them are wasted, and they do not get the training for which they volunteered.

This waste is usually caused by the applicants' failure to prepare themselves physically and mentally for the challenges of the course or by their failure to take care of the necessary administrative matters.

Physical conditioning is vitally important. The course is rigorous, and the students are on their feet almost continually throughout each training day. The first thing an applicant must do, therefore, is to honestly assess his own physical stamina and take any remedial action that may be needed. The Army Physical Readiness Test (APRT) is the yardstick used to determine that fitness, and anyone who wants to attend the course must take the APRT not more than 30 days before the date on which they apply for training. The minimum standards that must be met on the test are those for the 17-25 age group, regardless of the volunteer's actual age. Those standards are:

- Pushups—40 in two minutes for men; 27 in two minutes for women.
- Situps—40 in two minutes for men; 27 in two minutes for women.
- Two-mile run—17 minutes, 55 seconds for men to complete the run; 22 minutes, 14 seconds for women.

In addition, although this is not now mandatory, a volunteer should also be able to execute six good chinups (eight modified chinups for women) by the time the class starts. This exercise is considered important because it is similar to the motions a parachutist must use in controlling a parachute.

Since a volunteer's physical condition can change between the date of this test and his actual reporting date, each volunteer must pass a verification APRT within the 15-day period before that reporting date.

Volunteers who must leave their units for other duty or for leaves before airborne training and cannot take the verification APRT within the 15-day period must pass it immediately before leaving their units. And they must maintain that level of fitness up to their reporting date. No volunteer will be allowed to begin airborne training without proof of this verification test (DA Form 705, APRT score card).

Just meeting the physical fitness entry requirements will not guarantee that a volunteer will have no problems in the

course's PT sessions. But a properly administered APRT (with the emphasis on *properly*) is an excellent indicator of a person's fitness for airborne training. Regardless of their APRT performance, students who exhibit poor physical conditioning during the training will be dropped from the course.

Physical training is conducted daily during the first two weeks of the course, and students must "qualify" by being able to complete the exercises and the distance run each training day.

## TYPICAL

A typical physical training session during the first week looks something like this:

- Six chinups (eight modified for women).
- Five assorted stretching exercises.
- Ten repetitions of the side-straddle hop.
- Ten repetitions of the four-count pushup.
- Ten repetitions of the four-count situp.
- Ten repetitions of the knee bender.
- Ten repetitions of the body twist.
- A run of 2.5 to 3 miles in platoon-sized formations at a pace of 8.5 to 9 minutes per mile for men and 10 minutes for women.

During the second week, the number of chinups is increased to seven for men, ten modified for women. Exercise repetitions are increased to 12, and run distances to 3 or 4 miles, with the pace unchanged.

It is important to understand that these standards represent the minimum physical demands placed on the students. All training conducted during the course is strenuous and physically demanding.

In addition to physical conditioning, a good mental attitude and a sincere desire to complete the training are two of the most important attributes an airborne volunteer should have if he is to succeed. Students who lose their motivation and determination to "make it" invariably drop out for one reason or another.

There is no numerical way, of course, to measure a soldier's level of mental preparedness. An airborne volunteer must judge this by evaluating himself. But a

proper mind-set throughout the course is absolutely essential. After all, jumping out of a high-performance aircraft at 125 knots, 1,250 feet up is not something people normally do.

When prospective students report to Fort Benning, they must be wearing seasonal Class A or B uniforms, with proper shaves and with haircuts within U.S. Army standards. And they must make sure they have with them everything that is required, including records, clothing, and equipment. (They must report not later than 1200 on the reporting date for their class to the S-1, 1st Battalion, 507th Parachute Infantry, The School Brigade, Building 2748, Fort Benning).

First on the list of things each must have is a current medical examination that shows he is qualified medically for training under the provisions of AR 40-501. Although the current regulation states that a volunteer's medical examination must have been given no more than 12 months before the reporting date, this requirement has been superseded. The validity period for airborne medical examinations is now 18 months.

For an airborne medical examination to be valid, Block 5 of Standard Form 88 must indicate that the purpose of the exam is for airborne training, and Block 77 must specifically state that the volunteer is "qualified for airborne training."

Volunteers over 35 years of age must secure an electrocardiogram (EKG) and a medical age waiver and produce these along with their medical examinations when they report.

All airborne students, with the exception of medical and dental corps officers, must have at least 12 months of active duty remaining after completing the course. Officers who do not meet this requirement must request extension of active duty under the provisions of AR 135-215. Enlisted volunteers must extend or reenlist under the provisions of AR 601-280.

Volunteers who report without the proper documents cannot be accepted for training. The following is a checklist that can be used as a guide:

- At least 15 copies of orders and/or DA Form 1610 with fund cite.
- Valid physical examination, with EKG and medical age waiver for volunteers over 35.



• Valid APRT score card (DA Form 705).

• Valid verification APRT (also on DA Form 705).

• Finance records for those reporting to Fort Benning in a PCS status or attending airborne training TDY enroute to another duty station. Others need not bring finance records.

Although DA Pamphlet 351-4 (changes to which are pending) lists the clothing, equipment, and uniform requirements for the course, students should report with the following items as well:

• Five pairs underwear.

• One sweat band for helmet liner.

• Three towels.

• Two wash cloths.

• Two pairs eyeglasses, if required.

(Military issue glasses are recommended because of their durability. Non-issue glasses must be made of shatterproof material.)

• Boot-shining gear.

• Toilet articles.

• Appropriate civilian attire for off-duty hours.

• About \$100 for incidental or personal expenses.

Volunteers who truly want to earn those

silver wings will prepare themselves in all these areas and will overcome the mental and physical obstacles of the course. Like countless thousands before them, they will find that they have an inner strength that they have never tapped before. The end result will be a prouder, more confident soldier and a stronger, better prepared Army.

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**Captain Danny L. Greene** is assigned to the 1st Battalion, 507th Parachute Infantry at Fort Benning. Previously, he served with the 82d Airborne Division and in Special Forces units. He holds a master's degree from the University of Southern California.

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# Heavy Battalion Trains

CAPTAIN STEVE BRASIER

The Army's AirLand Battle doctrine has brought about many changes in its combat service support (CSS) concepts. These changes are designed to allow better support of the forces while it is conducting tactical operations. The most fundamental CSS organizations — those found within maneuver battalions — have also undergone some changes to allow for the best use of the available CSS assets.

Students at the U.S. Army Infantry School ask many questions about the CSS assets of a heavy battalion and about the best way to organize and employ them. By posing and attempting to answer some of these questions here, perhaps I can clarify some of the fundamental considerations in designing and employing a battalion's combat service support.

## What are "trains"?

Any grouping of personnel, vehicles, and equipment for the purpose of providing combat service support to a unit is called "trains." The design of trains is intended to make them most readily

available to a unit but with the least possible exposure to damage from enemy action. They are normally employed in combat organizations from company through brigade and usually operate from support areas. Maneuver battalions always organize trains.

## How should a battalion's trains be organized?

The AirLand Battle concept of nonlinear maneuver dictates that battalion trains be echeloned. Echelonment not only provides immediate support and more flexible usage but also increases the survivability of a unit's logistical assets.

A battalion's CSS assets are divided into four echelons — company trains, combat trains, a unit maintenance collection point (UMCP), and field trains.

The composition and operational control of the battalion's echeloned trains are determined by the commander on the basis of an analysis made by his staff during the planning phase of an operation. A battalion should prescribe a base line for each CSS echelon in its standing

operating procedures (SOPs).

## Where should a battalion's trains be located?

There are several criteria to consider. The trains should be:

• As close to the FEBA (forward edge of battle area) as is tactically sound.

• Convenient to the units served. (There should be both a main supply route and alternate supply routes so that the forward units can reach the trains rapidly. The routes to and from and within the field trains should be planned to avoid congestion.)

• Away from the enemy's main avenue of approach.

• Far enough away from the combat elements so that they do not impede a tactical unit's freedom of movement.

• Beyond the range of cannon artillery. (This is not applicable to battalion combat trains, UMCPs, and company trains.)

• Where there is enough space for dispersion of vehicles and activities; cover and concealment from hostile

ground and aerial observation; and firm ground for the vehicles.

- On terrain that favors defense against air or ground attacks; that makes local security easier; that does not contain a barrier to supply and recovery operations; and that will not present major obstacles to the unit or canalize it.

## Company Trains

### How are the company trains configured?

The company trains are best described as "austere." Typically, they consist of a recovery vehicle, a maintenance track with mechanics and tools, and one or two M113A1 medical evacuation vehicles. In addition to these armored vehicles, thin-skinned vehicles also operate in the company trains but only during resupply operations. Under decentralized feeding operations, company trains sometimes have a mess team attached, most likely when the unit is not engaged in tactical operations.

The company trains serve as the focal point for company logistical operations — a distribution point for supplies, a maintenance center, a location for medical evacuation operations, and a point where requests from company elements are received. The activities in the company trains are planned by the company XO on the basis of his commander's instructions but are supervised by the company First Sergeant.

### Where are the company trains located?

In offensive operations, the personnel and vehicles that make up the company trains move with the company and receive rear protection from a squad or platoon from the company. If an operation has a shallow objective, or if the company is part of a deliberate attack, the trains move behind the company, taking maximum advantage of the terrain for cover and concealment.

In the defense, the company trains support the company from a position 500 to 1,000 meters behind the company's forward positions. The company trains should be in a position that makes the most of the available cover and con-

cealment and of the support provided to the company.

## Combat Trains

### How are the combat trains organized, and what support do they provide?

The combat trains are organized to provide immediate, critical support to the tactical operations. These trains serve as the first source above company level for medical and personnel service support and a limited source of supplies for the forward elements of the battalions — Class III, Class V, and medical support.

The exact organization of the combat trains depends on the mission and the situation. These trains should contain the fewest people possible and the smallest amount of equipment necessary for the mission.

### Who is in charge of the combat trains?

The battalion S-4 is responsible for their operation and security; in his absence, the battalion S-1 assumes this responsibility. The S-4 operates from the administrative/logistical operations center (ALOC), an M577A2 command post vehicle.

### How should the combat trains move, and where should they be located?

The movement of the combat trains depends on the kind of operation a battalion is conducting.

In slow-moving offensive operations with limited objectives, the combat trains normally provide support from their initial location during the attack. Then, once the battalion's objective has been secured, the trains can displace to a forward location when directed, or as planned. The considerations for using this technique are based upon the terrain and the situation.

The terrain should be such that the combat trains are not exposed to enemy observation or direct fire, and the S-4 must take care to select locations that offer the best concealment and cover.

The present and anticipated tactical situations affect the movement of the combat trains. Before tactical opera-

tions start, the S-4 must make sure the combat trains will not be located in a position on the battlefield that will interfere with the maneuver of the force and that their selected locations do not serve as obstacles or limitations to the logistical support provided to the battalion.

In the fast-moving offensive operations prevalent in the AirLand Battle, where a battalion is moving over long distances, the combat trains move with the battalion. If the battalion is forced to deploy, the combat trains disperse to seek cover and concealment.

During defensive operations, battalion combat trains are located in the battalion sector, four to ten kilometers behind the FLOT (forward line of own troops). The exact location depends on many factors such as terrain and road networks. A key consideration is the ability of the combat trains to maintain radio contact with both the forward units and the battalion field trains.

Sometimes, a deeper combat trains location may be necessary because of the mobility and flexibility of the tactical situation. (In more static defensive situations, the combat trains may be employed farther forward.) Deeper positioning allows for better survivability of the combat trains and for the placement of larger amounts of supplies, particularly fuel and ammunition. To ensure effective support, certain supplies and supply elements may have to be attached to those teams that cannot otherwise be reached. Supplies may also be cached in the positions that are most likely to be occupied. The mobile pre-position technique — the positioning of trucks forward of the battalion combat trains when likely rearm locations cannot be determined — may be considered.

## UMCP

### What is the UMCP?

The UMCP is a forward maintenance area established and operated by the battalion. It is the point to which the forward units take damaged equipment that they cannot repair. It consists of the equipment and personnel from the battalion maintenance platoon. The UMCP is controlled by the battalion mainte-



nance officer (BMO), who is responsible for its composition and security.

#### **What is the composition of the UMCP?**

Its composition is not fixed, but depends on the BMO's analysis of both the tactical and the maintenance situations. The maintenance resources in each of the company trains (recovery vehicles, tools, test equipment, and personnel) and the maintenance resources required in the field trains must be taken into consideration. Because of the limited maintenance resources available to the battalion, there can be no waste. The BMO must see that the right resources are at the right place on the battlefield at the right time. If the need develops for more maintenance resources in an echelon, the BMO must shift the maintenance platoon's resources to meet that need.

In addition to the resources of the maintenance platoon, damaged vehicles and their crews are also present in the UMCP, and the BMO must take action to ensure that these vehicles and crews do not accumulate. The UMCP should never become so large that it cannot displace rapidly to new locations.

#### **What can be done to control the size of the UMCP?**

Its size can be controlled through the following actions:

- Having only essential maintenance resources present.
- Evacuating to the field trains maintenance site any damaged equipment that cannot be repaired within six hours of its arrival.

• Performing only mission essential maintenance.

• Having effective maintenance resources in the company trains.

#### **Where should the UMCP be located?**

It should be somewhere along the battalion's main supply route and close to the combat trains. The guidelines for locating and moving the combat trains in the offense and defense also apply to the UMCP. In fact, the combat trains and the UMCP may be located together.

### **Field Trains**

#### **What is the organization of the field trains?**

The field trains contain the headquarters company (HHC) command post, the battalion supply section, the mess sections (centralized), the support platoon headquarters, and all of the remaining vehicles and supplies of the support platoon not found in the combat trains. Also found here are the remaining elements of the maintenance platoon and all the company supply sections.

Support platoon supply vehicles in the field trains should always be loaded. Loaded ammunition vehicles should be positioned away from the maintenance area and the Class III point to prevent traffic congestion and improve safety. The Class III point should be near the maintenance area.

When the mess section is centralized, the mess teams should be located together, because more meals can be prepared with less effort and resources.

When the mess section is decentralized, a Class I distribution point is needed to break down rations into company lots.

The maintenance platoon assets that are not needed in the company trains or the UMCP operate from one location in the field trains. Ideally, this site should be on the edge of the field trains to reduce traffic congestion and in fixed facilities to reduce the trains' noise and light signature.

#### **Where are the battalion field trains located?**

The battalion field trains operate from a location in the brigade support area (BSA) that is designated by the brigade S-4. The maneuver battalion's headquarters company commander is in charge of the field trains, and he designates the exact location of each element in the trains. He is responsible for ensuring that the internal defense plan of the field trains is developed and tied into the BSA defensive plan. He also controls vehicle movement into and out of the field trains, and should establish a road network that allows one-way traffic into and out of the area.

These questions and answers provide an overview of the subject of battalion trains as they are generally organized and employed in the AirLand Battle doctrine. The application of these guidelines depends, of course, on many variable aspects of the battlefield.

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# **Rail Movement Spreadsheet**

**CAPTAIN CHARLES B. PELTO**

An Army logistician—an infantry battalion or brigade S-4, for example—often has to do things he has never done before, especially when logistics is not his pri-

mary specialty. And sometimes he wishes he had never been given a particular "opportunity to excel"—such as planning to ship all his unit's equipment by train to

the National Training Center (NTC) in California for its training cycle there. (Once he does it, he probably hopes he never has to do it again. But he knows

he will—it is just a matter of time.) For many logisticians who have never even ridden on a train, this task can be a real nightmare.

This operation may not be too difficult for those battalion S-4s in Germany who do this sort of thing all of the time. Their battalions usually take everything they have with them when they go to Grafenwoehr, for instance, so they know exactly how much train space they will need for that equipment. In fact, their load plans have been worked out in considerable detail over the years and are practiced constantly.

But things are different in the States. Whatever training is conducted takes place on an installation, and trains are considered to be in the realm of the installation transportation officer (ITO). Before NTC, an S-4 didn't have to know much about trains to make a shipment. All he had to do was fill in the blanks on some forms, turn the forms over to the ITO several months before the planned shipping date, and then count on the proper number of rail cars to be spotted at the proper time. There was some manual labor, of course, and some loading had to be done. But the ITO usually took care of the major problems, like ordering the cars.

## BROADENED

Now, though, in the days of NTC, an S-4's job has been broadened considerably and having to plan train loads has become a mandatory, recurring activity for every infantry and armor combat unit. For everyone except the S-4, getting to the NTC can be a pleasant, if different, experience. For the S-4, getting to the NTC is not nearly as pleasant and requires him to make an agonizing analysis of the material his unit can expect to draw at the NTC and then to identify those things his unit must take to fill out, let's say, a brigade task force. Here's how the process usually works:

At about D minus 100, the brigade determines the minimum amount of equipment it must have at the NTC if its exercise is to succeed. (This list is developed by the S-4 from information provided by the task force's subordinate units.) About

10 days later, the NTC sends the brigade logistician the latest operational readiness (OR) information, from which he can get an initial estimate of the amount of equipment that will be available to the brigade once it arrives.

The problem is that at least three other units will be using that equipment in the meantime, and he does not know exactly what will be available 90 days later. This forces him to do some second guessing, especially on low density items such as combat engineer vehicles and armored vehicle launched bridges.

By comparing the brigade's list of minimum requirements with the OR list provided by the NTC staff, he can decide on the types and quantities of equipment he has to ship. With this filler list in hand, he then goes to his installation transportation officer (ITO) and gets a picture of what the train will be like. This must occur at about D minus 67.

The final OR list from the NTC comes at D minus 30. This will be the last official report and the most important to the submission of equipment lists to the ITO.

A week or two later, after many man-hours of work compiling data, the ITO will be able to tell the logistics officer how many rail cars, by type, will be in the train. (He may also tell the logistics officer that he would rather not see him again on this subject, but that is just wishful thinking.)

The ITO knows all about the changes that are bound to come, both from the NTC and from the task force itself. In the course of this preparation, most of the unit commanders in the task force will review their equipment lists and probably ask for "minor" changes that cumulatively will equal *major* changes. As a result, the logistics officer will be in constant touch with the ITO asking questions and asking that modifications to the equipment list be processed to determine their effect on the makeup of the train.

To say at a certain point that there will be no more changes ignores the fact that commanders tell their staffs what to do, not the other way around. Although commanders can help keep changes to a minimum if they take certain steps, nothing can be done to prevent changes in the status of the equipment at the NTC.

Clearly, then, these changes must be

managed at brigade level, and someone has to do it. It is difficult or impossible for the ITO to give the brigade a dedicated train planning expert. The brigade S-4 shop has a number of people, but they will have enough to do just staying on top of routine operations and usually do not have the training for the job in any case. Although the brigade may be able to pull a bright officer in to do this job, spare officers are usually rare in a combat brigade.

## SADDLED

It is more likely, therefore, that the brigade logistics officer will find himself saddled with the mission without any additional resources and will have to learn as he goes along. If he does not get some support, though, he can expect to spend many nights at headquarters trying to redesign his train on the basis of the changes requested that day. (In fact, he may as well ask the supply sergeant for a cot and kiss his family good-bye for the duration.)

Much of this can be prevented, fortunately, with the application of certain decision making tools such as a micro-computer and an electronic spreadsheet program.

With these two items the logistician can prepare an electronic spreadsheet that will perform all the necessary arithmetic calculations to determine if a proposed change will go beyond the limits of both the train size and the budget.

The brigade logistics officer, after studying the computer and the program, can take an already prepared template for planning the train configuration, load in key information involving the equipment required and the equipment available, identify the units that are to take their own equipment and the equipment itself, and let the program determine the size of the train. The program can then calculate, in just minutes, the effect of any proposed changes and alert the S-4 if they will violate his constraints.

Rail cars for major movements usually are leased to the Government by commercial railroads at a set price. Each car costs the same, whether it is a commercial gondola or an official Department of



Defense oversized flatcar (called a DODX). Using the rate for the train that went from his installation to the NTC most recently, the logistics officer can estimate, with reasonable accuracy, the cost of the movement. (This information is most readily available from the installation Comptroller's office.) The ITO may get a slightly different price when the Military Traffic Management Command (MTMC) comes back with the contract, but that is not of critical importance. The budget people at installation level understand that such differences exist between estimated and actual costs.

The real benefit of this system is that the logistics officer can now answer a call from one of the unit commanders or executive officers and tell him within minutes if a proposed change will cause an unacceptable increase in the size of the train. He can do this without having to go to the ITO and without having to spend extra hours in the office at night.

The logistics officer can also carry on with his routine operations, keep the subordinate units of the brigade task force happy, keep the budget officers at divi-

sion and installation levels informed of cost estimates, and also keep the brigade commander abreast of everything.

With a good printer, a hard copy of the spreadsheet can be generated, duplicated, and distributed to help keep the subordinate units fully informed about their portion of the train. They will be able to spot any discrepancies immediately and call in their corrections.

## SPREADSHEET

The spreadsheet (see example) is divided into two distinct portions. Each portion deals with a specific aspect of the activity and is further divided into groups of columns, each of which addresses a specific function.

The upper portion of the entire spreadsheet deals with the equipment that the brigade task force must use while on the ground in the exercise. It is divided into three groups of columns arranged from left to right.

The first group of seven columns identifies the types of equipment by nomen-

clature, model number, line item number (LIN), length, width, height, and weight. This information, organized according to LIN, is useful in preparing the load lists that the ITO will want later. So when a unit calls and asks for a change, if they refer to the item by number, it will be easy to find. The operator does not need to make any entries in these columns.

The second group of five columns shows the quantities of equipment that must be considered for transportation. Here the operator enters the information about the equipment the brigade task force will need in the "Quantity Required" column and what is available at the NTC in the "Quantity Available" column. The program will tell the operator how many items he has to add to or subtract from the planned amounts in the "Adjustments" column. The "Quantity Planned" column is a tabulation of the data from the third group of columns.

This third and final group in the top portion specifically identifies the units that will be participating in the exercise. In the example provided, generic units have been used. The operator, with a lit-

RAIL CAR REQUIREMENTS PLANNING (EXAMPLE)																						
NOMEN	MODEL #	LIN	LENGTH (INCHES)	WIDTH (INCHES)	HEIGHT (INCHES)	WEIGHT (POUNDS)	QUANTITY REQUIRED	QUANTITY AVAILABLE	QUANTITY TO BRING	QUANTITY PLANNED	ADJUSTMENTS	HMC BDE	IN	AR	FA	ENG	ADA	FWD SPT BN	CAV	MI	S16	MP
CONEX	LARGE	C13311	102.0	75.0	82.5	10000	90	0	90	90	0	4	18	19	14	6	8	16		1	1	3
AVLB	M-60	C20414	402.5	158.0	70.0	29300	2	0	2	2	0					2						
CARR MORT	M-125	010276	191.5	100.0	84.8	20419	0	0	0	0	0											
CARR MORT	M-106	010741	191.5	99.6	85.0	20131	12	8	4	3	1		1	2								
CARR CSO	M-548	011049	232.0	100.0	76.8	16774	22	10	12	7	5				6		1					
CARR CP	M-577	D11538	191.5	100.0	104.0	22548	32	15	17	16	1	3	5	5	3							
CARR PERS	M-113	012087	191.5	99.6	84.0	18940	108	94	14	10	4	1	3	1	1			4				
CEV	M-728	E56578	289.0	143.5	127.8	110560	2	1	1	2	-1					2						
ITV	M-901	E56896	190.5	100.0	103.0	23500	26	26	0	0	0											
SHEL ELEC	M-147	H01912	148.0	86.8	83.0	3010	0	0	0	0	0	4	1	1	1	1	4	10			3	
GEN SET	ANY TYPE	J49089	EXACT DATA VARIES WITH MODEL #				21	18	3	2	1				1	1		10				
GUN ARTY	M-163A1	J96694	190.0			24037	7	3	4	5	-1				1	1		10				
HOMITZER	M-109A7		220.0	97.8	88.8	22244	0	0	0	0	0					5			7			
TRK FS	M-49C	I48914	268.0	103.0	126.0	25875	9	3	6	7	-1											
TRK FS	M-559	I58078	391.8	108.3	100.3	27345	10	5	5	5	0		1	3	1							
TRK TRCTR	M-52A2	I59326	258.3	98.3	85.9	17960	32	15	17	17	0			4				13				
TRK TRCTR	M-123A1C	I59874	289.4	114.8	93.0	30082	0	0	0	0	0											
TRK UTIL	M-151A2	I60833	131.5	64.0	52.5	2450	91	50	41	24	17		4	2	1	2	2			2	1	10
TRK EXP	M-820A2	I62271	368.8	98.5	137.1	29495	7	1	6	6	0							6				
TRK SHOP	M-109A3	I62340	264.8	99.5	130.0	15760	16	4	12	12	0							12				
TRK WKR	M-543A2	I63299	349.0	98.0	104.9	33998	8	6	2	2	0							2				
TRK WKR	M-553	I63436	400.8	108.3	117.3	39789	4	1	3	3	0		1		1			1				
							1219	619	600	530	70	20	73	82	78	28	18	185	0	9	13	24
RAIL CAR	CAPACITY	TYPE EQUIPMENT					EQUIP QTY'S		UNUSED SPACE			ADDITIONAL ITEMS			TOTAL # CARS			PER CAR COST		TRAIN COST (\$000)		
DODX	1	OVERSIZE					5		0.00			0			5							
DODX	2	OVERSIZE					14		0.00			0			7							
FLATBED	2	LRG TRCK					16		0.00			0			8							
FLATBED	2	LRG WHL					31		-0.50			1			16							
FLATBED	3	WHL/TRCK					48		0.00			0			16							
FLATBED	3	WHL/TRCK					235		0.00			0			85							
PIGGYBACK	2	SEMI-TRLR					25		-0.50			1			13							
TRI-LEVEL	21	SHL WHL					44		-0.90			19			3							
GONDOLA	8	CONEX'S					90		-0.75			6			12							
GONDOLA	1	AVLB'S					2		0.00			0			2							
TOTALS							530					27			167			2900		484.3		





Members of the 1st Battalion, 24th Infantry, in Germany for REFORGER exercises, secure their vehicles on flat cars.

tle effort, can apply actual unit designations and additional units through procedures described in the program manual that comes with the spreadsheet's software.

The operator, based on his knowledge of unit TOEs and reference materials, will designate the number of items to be brought by rail to the exercise site. This is done by cross-referencing the unit column with the row for a specific item of equipment and entering the desired number. The program will automatically adjust all the figures in the upper portion of the spreadsheet accordingly.

When the "Adjustments" column reads "0" from top to bottom, the operator has identified all the equipment that has to be taken along to supplement the equipment identified as available at the NTC.

The lower portion of the spreadsheet provides the critical output information about the nature of the train. Here the area is divided into four groups:

From left to right, the first group of three columns gives basic information about the various rail cars for rapid reference. No entries are made here by the operator.

The second group consists of one column. Most of the critical calculations on rail car requirements are shown here as totals of the different types of equipment that can go on a corresponding type of rail car.

Thus the computer looks at the items of equipment and, based on various formulas, determines what type of rail car they will be loaded on. For example, M1 and M60 tanks, M88 tracked recovery vehicles, and other oversized loads are placed on DODX flat cars. Quarter-ton trucks and their trailers are usually placed on tri-level cars that will accommodate 21 items, while semi-trailers are loaded onto commercial piggy-back cars, each of which will carry two trailers. Eight CONEX containers will fit in a standard gondola car, while one bridge structure from the AVLB will fit on a gondola.

Most of the rest of the equipment will fit three items to a standard flat car. Although the ITO may state that such cars come in different lengths and that they can conceivably take more equipment, even he uses three items per car as a rule of thumb and accommodates the different types of equipment by requesting different-sized flat cars. (As with all rules, there are exceptions. The five-ton cargo trucks, for example, will usually wind up being placed two per flat car.)

All of this is based upon information derived from assorted Army publications involving lengths of vehicles and other equipment and also from information gathered from ITO load-planning techniques. For additional information on equipment not listed in manuals in the office, the logistics officer should consult with the ITO.

The third block of data in this portion has two columns. They show calculations on the unused space on each type of car and how many additional items can be accommodated. The operator does not make any entries here.

The fourth group tells the operator how many rail cars, by type, will be needed to carry the planned equipment to the exercise site and carries the information out to the estimated cost for the train. The operator enters the information on the cost of a rail car for the last similar exercise by a unit from that installation below the dashed line under "Per Car Cost." This entry allows the program to inform the operator of the estimated total cost. The figure is given below the dashed line under "Train Cost" in thousands of dollars (484.3 represents \$484,300).

The spreadsheet depicted in the example was based on equipment available at Fort Carson, Colorado. Units that have different equipment may enter new rows of equipment and modify the calculations after studying the operator's manual for their specific program. They must be sure to insert new rows between the top and lowest rows in the top portion and copy formulas down into the blank cells of the spreadsheet where appropriate; this will be mostly in the second group of columns. Then, based on the length and weight of an item, the proper row is adjusted in the "Qty's" column of the lower portion to include the new row in its calculations.

(The computer I used consisted of an Apple II+ with a Smith-Corona TP-I, letter-quality printer. The software was MULTIPLAN by Microsoft. The entire assembly would cost about \$1,600 today. I highly recommend, however, that a simple dot-matrix printer be selected instead of the slower letter-quality ones. The information and the template necessary to support this type of data processing has been turned over to the Command and Control Micro-computer Users Group (C<sup>2</sup>MUG) at Fort Leavenworth, Kansas. In this manner the information has been made available to any logistics officer who has a critical need to know how to plan to load a train without making it his life's work.)

The advantage of this system is primarily the time it saves. With it, a bri-



gade logistics office can plan the train for an NTC rotation without the need for additional personnel. Another benefit of this system includes the rapid flow of vital information between units and the identification of necessary corrections. In addition, because the computer does all the mathematics, this eliminates most of the potential for mistakes. The "Adjustments" column will even provide a check of the data the operator listed under the units and will help identify where an erroneous entry may have been made.

The principal disadvantage of this system is that it requires a good computer, a good electronic spreadsheet program, and a good operator. But with the effort to modernize our troop units by allowing the procurement of computers, this may not be too difficult. If such a computer is not available at the brigade level, the unit's division headquarters will probably have one and probably a copy of a good electronic spreadsheet as well.

The implementation of this technique should let future logisticians save a great

deal of time and reduce the burden on local installation transportation offices throughout the Army.



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# SWAP SHOP



Here's how to fold a map to one-ninth its original size and use it without ever having to open it out to a larger size. Get a map, or preferably some practice paper, some glue or transparent tape, and a razor blade, and try it:

1. Lay the map face up on the table with north at the top.
2. Fold it in half (turn the bottom edge up to meet the top).
3. Crease the folded map into three equal parts with the creases parallel to the center fold.
4. Open the map completely and lay it face up in the normal position. Turn it so that east is at the top, and fold it in half as in Step 2 (fold the bottom to the top). Again, crease the folded map into three equal parts with the creases parallel to the center fold.
5. Open the map completely and lay it face up (with north in the normal position at the top). It is now creased into 36 equal parts (Figure 1). Using the razor blade, cut as indicated by the heavy north-south lines.
6. Next, position both hands in such a way that the fingers and thumb of each hand straddle the second crease from the top (Figure 2). Draw the paper up so it will fold at this crease and then fold over toward the top edge. Draw the paper up at the second crease from the bottom to meet the top edge, and fold bottom edge up to meet top. An "edge view" of the map should now look like three "V"s joined together (Figure 3).
7. Open the map to the center section (without unfolding the re-

mainder, and turn it so that east is at the top. Straddle the second crease from the top as in Step 6. Draw the paper up and fold toward the top as before. Repeat the procedure with the second crease from the bottom, and fold the bottom edge up to meet the top, all as in the previous step. An "edge view" will again look like three "V"s together.

8. Allow the map to open at the middle V and lie flat on the table, exposing the center section without unfolding any other parts. Apply glue to the adjacent backs of the map where the cuts have been made, or bind the cut edges together with transparent tape. The sectors, so joined, can now be turned as one page.

You can now find any point by turning the flaps up and down, left and right. You can index the map for quicker reference by labeling the three sections of each lateral strip: A1, A2, and A3 (top); B1, B2, and B3 (center); and C1, C2, and C3 (bottom).

The map may be glued into a manila folder for protection and easier use, but it will have to be opened to two-ninths size to find all features and sections. Simply apply glue to the four bottom back corners and align the center crease of the map with that of the folder.

If you want to carry the map in a pocket-size notebook, fold it to one-thirty-sixth size and glue it to the notebook on one of the back corners. The map may be opened to one-ninth size for reading.

This method works with all maps, including those composed of sector sheets that have been glued together.

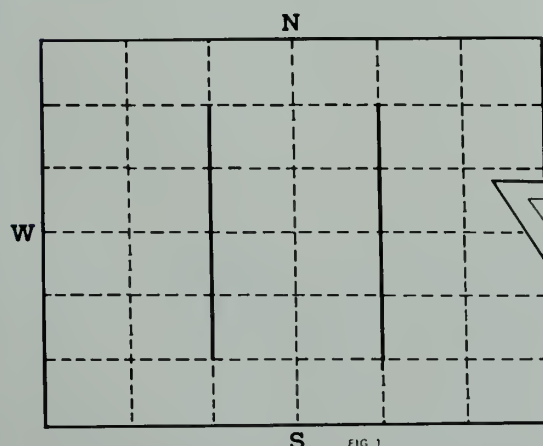


FIG 1

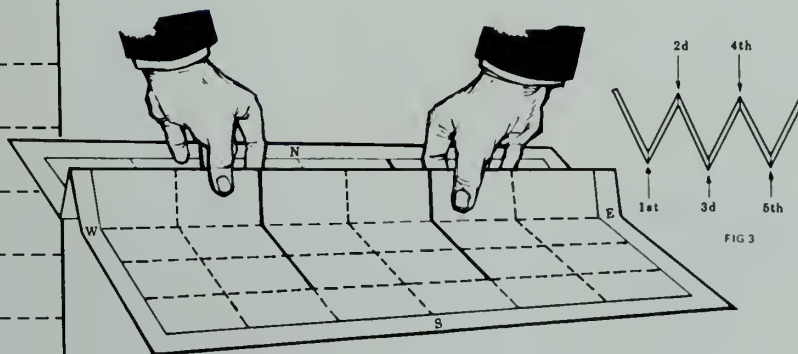


FIG 2

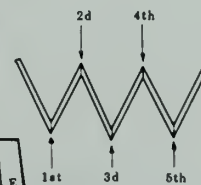
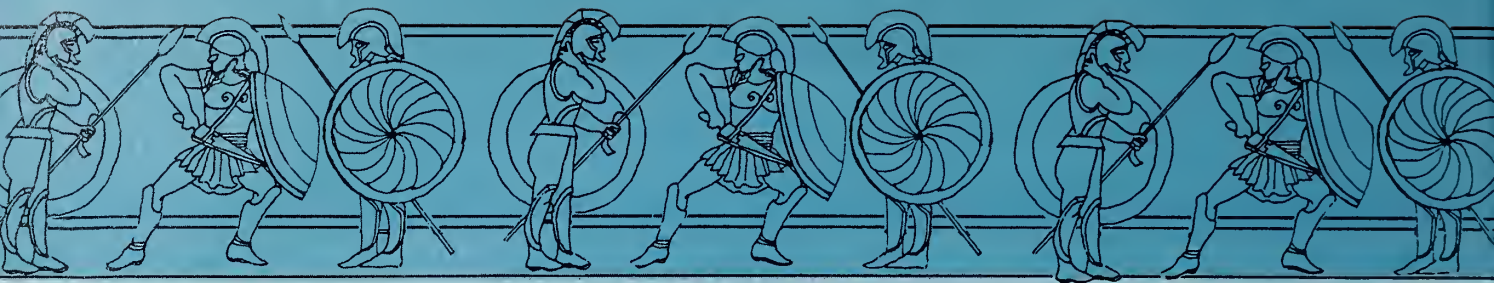


FIG 3

*(Reprinted from the Infantry School Quarterly, January 1956, pp. 29-31; prepared by Major James R. Darden, then an instructor in the Infantry School, who had learned the technique from a friend.)*



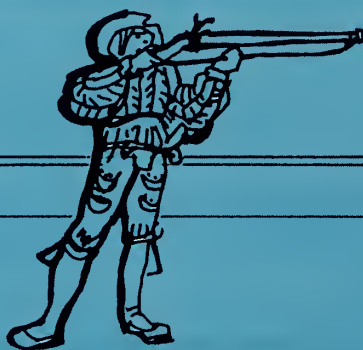
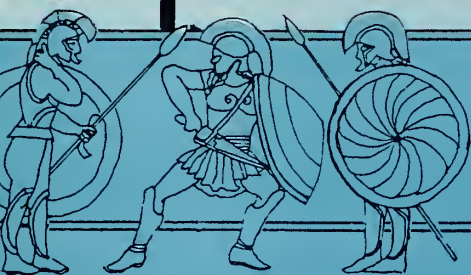
# Light Infantry

The advent of the Army's new light infantry divisions has brought about much discussion on how to use these new units—and the discussion continues.

The formation of this light infantry force was based upon a stated need: to "improve the Army's capability to meet security demands within the dynamic and volatile international environment . . . a strategically responsive and flexible infantry division." To do that, the light infantry has been correctly defined as a force "composed primarily of footmobile fighters . . . organized, equipped, and trained to conduct effective combat operations against light enemy forces."

The problems squarely facing that light infantry, however, are firepower, the weight of the equipment, and the mobility of the force. There are solutions to these problems, but each must be examined carefully so that the shock value of firepower and rapid mobility is not forgotten or discarded.

The current doctrine on using a light infantry force really boils down to this: Can we get a U.S. presence into a hot spot with enough capability and "bravura" to forestall a much more dangerous situation? To examine what our forces must do, it may be instructive, in the words of J.F.C. Fuller, to "look back as the surest way of looking forward."



MAJOR DAVID G. BRADFORD  
UNITED STATES AIR FORCE



First, let's go back to 4 B.C. and the generalship of the Athenian Iphicrates, because he created, trained, and commanded a new type of infantry force that wore lighter armor and carried more "firepower." Then, because the force was lighter, he brought about a change in tactics—tactics that won the day against a more heavily armed opponent—and kicked off a series of changes that led up to what we have today.

### *Peltasts vs. Hoplites* (Equipment Drives Tactics)

Iphicrates should be considered the father of innovation in regard to light infantry forces. He saw the potential of light infantry units (*peltasts*) and used them with considerable success against the Spartans' heavy foot infantry (*hoplites*). Not only did Iphicrates learn from this some lessons about shock power and equipment weight, he also applied those lessons to his own heavy infantry force. He introduced modifications to his *hoplites'* traditional equipment, making it lighter and more deadly. And in doing so he increased his infantrymen's chances of succeeding against a more heavily armed opponent.

Before these reforms, infantry had tended to acquire heavier and less maneuverable armaments and equipment. Consider the Greek *hoplite*, for example, as he advanced against an enemy in battle: He wore body armor with metal scales on it and armbands and lower leg protectors made of bronze. He carried a shield that was built on a wooden core and faced with bronze and backed with leather; a long spear (6½-10 feet long) with a head of iron and a butt spike of bronze; and a short sword (with two-foot blade) with bronze fittings.

A heavy infantry force moving like an armored vehicle in the famous phalanx formation was probably an impressive sight. A *hoplite*, heavily armored, carried his shield on his left arm and, when in a combat formation, stood shoulder to

shoulder with his comrades. This solid wall of bronze shields, with ten-foot spears bristling out of it, was indeed formidable. But because of each man's tendency to edge behind his neighbor's shield, the phalanx had a habit of drifting to the right, which affected the outcome of many battles.

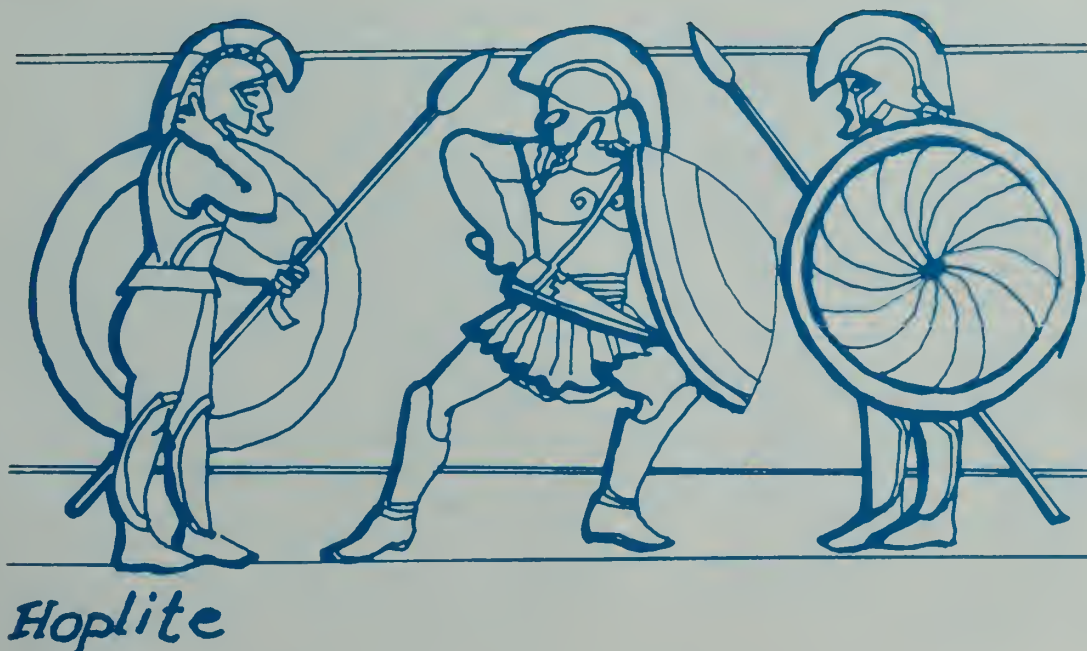
Iphicrates must have seen that this maneuver was dangerous and at times unwieldy. In light of his battle experience at Lechaeum, he introduced modifications to the traditional *hoplite* equipment, thus giving us the earliest beginnings of the light infantry force.

He replaced the heavy metal-faced shield with a smaller leather-faced one, the metal leg protectors with boots, and the metal body armor with quilted linen and leather helmet. (He lengthened the spear to 12 feet to compensate for the lighter armor.)

The Athenian general did not have too long to wait for an opportunity to demonstrate the capabilities of his new force of light infantry. During the Corinthian War, a Spartan *mora* (battalion) of 600 men was escorting a contingent of allied troops back to the Peloponnesus, when Iphicrates' new force intercepted it in the Isthmus, routed it, and inflicted crippling losses.

It can be argued that Spartan lack of foresight, combined with some bad luck, had produced this fatal battle situation. But Iphicrates had planned his own victory, a victory that vindicated his new tactical concept as borne out by his light infantry.

The efficient organizing, equipping, and arming of some Athenian heavy infantry units into a light infantry force, the *peltast*, is a historical lesson that bears careful consideration. Training and discipline are also key parts of efficiency and must never be overlooked, no matter how well equipped or armed a force may be. "Firepower" discipline is especially valuable, no matter what army or what century one discusses.



When real firepower came into being, the lessons of weight (armor), mobility, and tactics would become even more important.

### *Ashigaru vs. Samurai* (Firepower Over Heavy Equipment)

The *ashigaru* versus the *samurai* is a historical example that takes place in an almost closed society consisting of warriors and warlords, merchants and farmers, all part of feudal Japan in the 16th century.

Late in that century, the Portuguese, one of the few outside traders allowed in, introduced firearms to the Japanese, an import that was destined to change the entire fabric of Japanese society by the late 19th century.

During this time, there was a situation in which political and economic gains were dependent upon military force, and it was essential that a *daimyo* (warlord) try to be a military innovator. Equipping, establishing, and training the *samurai*,

the military forces of the period, was expensive and time-consuming.

A *samurai* wore heavy, specialized armor and was armed with the *katana* (standard fighting sword), *yabusame* (mounted archery equipment), and possibly the *naginata* (a heavy sword with a long curved blade). And since the *samurai* had become a distinctive class, not everyone could even become a warrior.

In the middle of the 16th century, however, a *daimyo* named Takeda Shingen began to discipline a group of farm workers into a fighting force. These peasant troops were called *ashigaru* or, literally, "light feet."

An *ashigaru* wore no armor but was clothed in a quilted uniform. He was armed with a long lance with a grappling hook arrangement on the end. This allowed him to move quickly on the battlefield, hook an armored, horse-mounted *samurai*, bring him to the ground, and dispatch him with a sword or spear. But most important, the *ashigaru* became the first type of soldier to use a firearm, a *harquebus*, which was fired by dropping a lighted match onto a touchhole. Because it was not very accurate, several were usually fired in volleys, but it was comparatively easy to learn how to use one. It gradually replaced the bow, which took more strength to use and more training to learn, as the *ashigaru's* main missile weapon.

As the *ashigaru* became better armed and trained with their *harquebuses*, the mounted *samurai*, for protection, became heavier and less mobile.

The most difficult task for the armor maker of this period was to build armor that could protect the *samurai* against both *harquebus* shot and arrows. Bullet- and arrow-proof armor did not come soon enough or cheap enough, though, so *samurai* warriors just compensated by adding another layer to their existing lamellor armor.

But there was another powerful warlord at the time who began to realize the benefits of integrating *ashigaru* soldiers and *samurai* into one army. He was the *daimyo* Nobunaga, a man noted for his fortress building ability. By 1575 he had organized a 30,000-man army of *samurai* and *ashigaru*. In his war for territory against the Takeda clan, he used his "light feet" infantry successfully against heavy mounted cavalry.

Nobunaga's defeat of the Takeda cavalry and the manner in which he directed it became a turning point in Japanese military history. Nobunaga caught up with the Takeda clan's army at the city of Nagashino. That battle is described by Stephen P. Turnbull in *The Book of the Samurai* as follows:

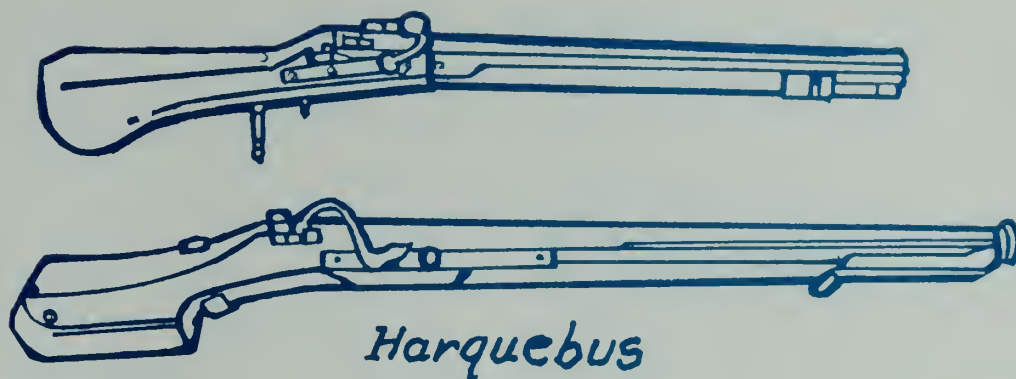
[Nobunaga] chose a strong position from which he could receive the charge and instead of advancing toward the castle to meet the Takeda, he constructed a palisade across the broken ground to the foot of Mount Gambo, leaving a narrow stream between him and the enemy. Gaps were left in the palisade every 50 yards or so for counterattack. From his 10,000 *ashigaru* *harquebusiers*, he detached the 3,000 best shots, and lined them up behind the palisade in three ranks. This was probably the first time that *ashigaru* had been given such a prominent place in any battle, demonstrating very clearly the discipline [of the *ashigaru*]. . . As the Takeda charged in, the *ashigaru* brought the cavalry crashing down with volleys of *harquebus* fire.

Turnbull says that most accounts of the battle credit Nobunaga with "ordered firing according to rank, one group fir-



*Samurai*





ing while the other reloaded.” Such an arrangement would put Nobunaga’s army a good “hundred years ahead of any other army in the world.”

The battlefield of Nagashino demonstrates how a technological innovation (the harquebus), coupled with changes in fighting organizations (the *ashigaru*) and tactics, can be a decisive factor in victory.

#### **Light Infantry vs. Infantry (Equipment and Tactics Drive Maneuver)**

If light infantry is a concept driven by technology, it is also a concept driven by the need for rapid troop movement and the ability to sustain a force on the move or engaged in battle. This is true not only for today’s U.S. Army but also for the Army of the American Revolutionary War period of 1775-1783.

From 1750 to 1800, armies were subjected to the trends brought about by technology (the flintlock musket), by rapid troop movement in battle (Frederick the Great’s rigid troop drill techniques), and by logistics (Frederick again, breaking dependence on depots). These three areas began to receive so much careful study and refinement that they eventually became doctrinal.

During the 50-year period too, doctrinally, maneuver—the tactical manipulation of fire and movement on the battlefield—became the predominant military characteristic. But the use of the flintlock musket and its increased rate of fire created a radical new problem. The rigid discipline of the early 18th century in Europe became even more stringent under Frederick. He turned the individual Prussian soldier into a robot. His units could rapidly change directions or shift into battle formation from marching column or vice versa, and fire by platoon replaced volley fire by larger formations. This led to a mobile infantry that could be shifted and massed at will on the battlefield to produce fire and shock action at a chosen spot.

Then, as armies were beginning to grasp the firepower lessons of the disciplined platoon firing repeated, lethal volleys from their smoothbore muskets, the rifle came into being.

Originally a sporting weapon, the grooved-barrel rifle achieved far better accuracy and range than the smoothbore musket. It took a long time for infantrymen to adopt the rifle into their arsenal, but it should not have. In Germany, the huntsman—the *jaeger*—had used it for nearly 200 years.

In our own country, German craftsmen in Pennsylvania had been turning out a lighter and longer-barreled version of their countrymen’s weapon for the American woodsmen. This rifle had a slower rate of fire than the musket, because each bullet (wrapped in a greased patch) had to be hammered down into the grooved barrel with a mallet. It was an individual arm, carrying no bayonet, but as a result of its use in the American Revolution, the rifle and the rifleman became an element in warfare.

Furthermore, out of the French and Indian War also came the use of the *jaeger* force, for *jaegers* had mobility, or maneuver by another concept. Skirmishers, light infantry troops covering the front of the field of battle, had always been present in one way or another but, because of their slow rate of fire, were not part of the regular army force. (For a more complete discussion of *jaeger* infantry, see “Light Infantry in Perspective,” by Steven L. Canby, *INFANTRY*, July-August 1984, pp. 28-31.)

Before 1756, European armies had considered the light infantry “expendable” irregular troops, but as a result of the defeat of British General Edward Braddock on 9 July 1755 in the battle of the Monongahela by 900 French and “irregular” troops, changes were made in the British Army. These changes led to the establishment in each foot regiment of a light infantry company. This light company was usually detached from its battalion for covering the advance of heavy infantry or for some other special mission.

The historical significance of examining how light infantry found its way out of heavy infantry is the discovery that light infantry could defeat a European trained and superbly drilled maneuver infantry force. The light infantry, given enough disciplined and accurate firepower from rifles, and protected by woods or hilly terrain, could defeat a numerically superior, formation maneuvering troop force. The U.S. Army proved

it on many occasions during the Revolutionary War.

One final refinement that gave light infantry a further break from the rigid school of maneuver was Frederick's logistical systems. Breaking away from the slavish dependence on depots, Frederick devised the system of having the individual soldier carry three days' rations in his knapsack, with eight days' bread supply carried by the regimental trains and a month's supply by the army's trains.

Frederick also had a fairly well organized transport system linking his armies to such depots as he did organize. Furthermore, his troops were trained and prepared to live off the land. Most important, his light infantry forces could move quickly, carry provisions organically, and hold their positions until the supply trains and heavy equipment and troops could be moved up.

These innovative ideas, though created piecemeal, would be demonstrated vividly as a whole by a German general in World War I who was innovative enough to drive the Allied Army almost back to Paris.

### ***Sturmabteilungen* vs. Static Infantry (Maneuver Drives Equipment and Tactics)**

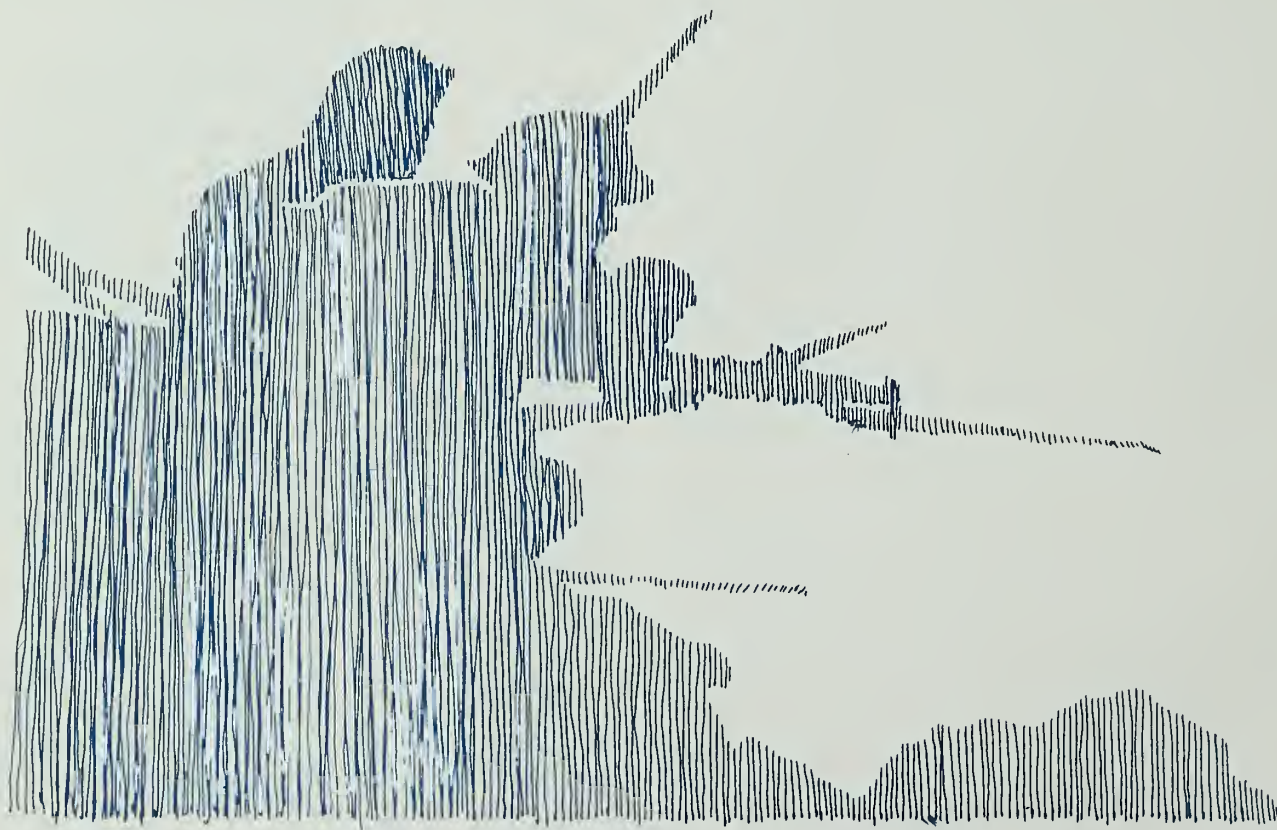
On 1 September 1917 German Lieutenant General Oscar von Hutier's specially trained *sturmabteilungen* (storm troops) attacked the northern anchor of the Russian Front in a new way. This was the first application of what would later become known as "Hutier tactics." The Russian Twelfth Army streamed eastward in panic, taken completely off guard by the sharp assault of Hutier's trained light infantry battalions.

Maneuver, or more correctly the Great War's distinct lack of maneuver, called for innovations in offensive tactics. General Erich von Ludendorff, commanding the German armies, depended on highly specialized shock formations trained in a wave method of assault—the same method General Hutier had experimented with during the Riga campaign in 1917. So before the start of his March 1918 Channel Port offensives, Ludendorff, knowing that his scarce manpower resources could not be wasted, decreed that, instead of sheer weight, Hutier's newly developed (and proven) tactical skills would be used to defeat the entrenched enemy forces.

Units in the line, as well as those moving from the Eastern to the Western Front, were combed of their youngest, fittest, and most experienced soldiers, and these were formed into storm trooper units. Armed with light machineguns, light trench mortars, and flamethrowers, they were to cross the trench lines, bypass centers of hard resistance and machine-gun posts, and, if possible, break through to attack the enemy artillery positions.

For these fast-moving tactics to be successful, Hutier's storm troopers were made physically light and given more firepower. They carried Bergmann 9mm submachineguns with snail-type magazines and stick bombs in large canvas grenade bags.

Every German army in the field soon had a main body of storm troopers officially designated a battalion. There were 18 battalions of storm troopers by the start of the Ludendorff offensive campaigns of 1918. When the offensive was launched on 21 March 1918, the German Army achieved surprising success using the Hutier tactics employed by these fast-moving troops.





These new tactics differed in two ways from the infantry tactics previously used by armies on the offensive. First, the attacking storm troopers bypassed strongholds and enemy units at the flanks, leaving the destruction of these elements to the second wave, and advanced boldly by infiltrating small groups until they reached the enemy artillery. (To increase their firepower, the storm battalions were equipped with specially designed light artillery batteries and mortars.)

The second change in tactics was that the storm troopers were followed by battle units consisting of infantry, machine-guns, trench-mortar teams, engineers, sections of field artillery, and ammunition carriers. The primary job of these units was to attack defended positions, repulse any counterattack, and generally overwhelm the already dazed enemy.

Spectacular results were achieved during the opening days of the March offensives. General von Hutier's Eighteenth Army gained 38 kilometers in four days, crushing General Sir Hubert Gough's Fifth British Army, taking 50,000 prisoners, and coming close to driving a wedge between the British and French fronts. The second part of the offensive, launched on 9 April, was just as successful. German storm troopers, backed by battle units, advanced some 20 kilometers in one day, the longest surge made on the Western Front since the beginning of trench warfare.

Although the tactic was successful, it did not have what it needed to sustain the German offensive. (Other offensives were tried unsuccessfully by an army exhausted by four long years of trench warfare.) The lessons are still valid, however, on how a light infantry force whose men were footmobile and individually armed with significant firepower could carry out an offensive. The Hutier experiments are still worth examining.

### U.S. vs. Them

#### (Tactics, Equipment, and Firepower)

Whenever a discussion gets around to the structure of the combat division, the words "experience" and "experiments" probably best sum up all the changes the U.S. Army has been subjected to over the years. The period between 1918 and 1973 found the U.S. Army, and practically all other modern armies, debating furiously the status of infantry.

In the Great War, the introduction of gas warfare, barbed wire entrenchments, mines, machineguns, tanks, artillery barages, and airplanes all seemed to conspire to either dilute, change, or eliminate the infantry. In 1934 a decade of debate began, taking on a life of its own as the Army began to design "light infantry divisions." The main purpose was to increase mobility and maneuverability, an idea pushed hard in 1939 by then-Brigadier General Lesley J. McNair, commander of the 2d Division Artillery. He became the chief proponent of the reorganization and restructuring of the Army's infantry divisions.

The division experiments carried out by McNair dealt with fundamental, back-to-basics questions regarding, among other things, frontages, firepower, integration of crew-served weapons by echelon, proportion of artillery and other branches to infantry, and transportation requirements.

His chief aim during this decade of experimentation was to get the most combat power and tactical mobility at the least cost in manpower, weapons, and shipping space. How he intended to do that—and the lesson that must strike home now—is well documented by a series of hard organizational studies.

Summarized, McNair wanted light infantry forces that could concentrate combat power into offensive units that could defeat the enemy, giving each unit what it needed to conduct operations on open, maneuver-oriented battlefields. He also wanted to restrict the amount of transportation needed for strategic deployment. He was more interested, for example, in trucks that could shuttle necessary supplies and ammunition to the division during a 24-hour period than in trucks that could carry everything in one lift. Although the rifle units would not be motorized, they could become so by the attachment of six truck companies to the division.

The primary lesson learned, however, was not organizational but doctrinal: This "light infantry force" could not be effective in defending against massed armor and airpower, nor could it attack prepared defenses without a significant amount of augmentation from non-divisional assets. In the long run, the division could not conduct operations that involved high casualties—the austerity of manning in the proposed McNair division gave it practically no absorbing capability. General McNair's untimely death left the problem of a light infantry force unresolved until recently.

### Summation

#### (Where is the Light Infantry Going?)

Where, then, does this leave the light infantry force today? What is its purpose? Against whom is it to be deployed? How do we sustain, rearm, and refuel this force? Do we have to back it up with a larger or heavier force?

The answers are hard to come by. John English's *A Perspective on Infantry* gives us some answers, but they may not be the answers we want to hear. Our own government's quest for "national security" also provides answers, because it promises us that light infantry forces will play a meaningful role in preventing low intensity conflicts and keep some "controllable crises" from escalating into "superior confrontations." But what do those words mean?

From a doctrinal viewpoint, this means that light infantry is being "organized and equipped to conduct combat operations against light enemy forces for periods of short duration" and that light infantry can be "rapidly deployed to conduct contingency operations ranging from show-of-force to full combat operations against a hostile force."

More meanings and answers are to be found in some well-thought-out articles in journals and magazines, others in books or lectures. But we will really learn more only after we have headed off the first crisis using a light infantry force. For now, the U.S. Army must take the concept of building a force that can reasonably respond anywhere in the world within a few days as a most innovative idea for using infantry. And to make the most of that force, we must look penetratingly at what history lessons tell us.

If we take the historical lessons presented here and couple them with the innovative thinking currently being done con-

cerning the light infantry, then we can have a viable force capable of performing its mission. What are those lessons?

Iphicrates teaches us to protect the soldier but to keep him as light in weight as possible. Technology can help us do that. Tomorrow the light infantry soldier's battle fatigues will become more protective, more bullet-resistant but still lightweight. The kevlar helmet is already here and has been battle tested in Grenada, and even more improvements are forthcoming.

Nobunaga teaches us to train light infantry so they can overcome a heavy, mobile force. His lesson is one punctuated with tactics, terrain, and disciplined firepower. Technology can give us some of those same advantages. Lightweight but devastatingly accurate antitank guided weapons are available for arming our infantrymen. Belgian arms manufacturers have developed a family of rifle grenades with armor-piercing, antipersonnel, smoke, and illuminating capabilities. These rounds are available for firing from a variety of infantry rifles, and they eliminate the need for separate grenade launchers, light mortars, and the personnel to use these weapons.

Frederick the Great instructs us to sustain the soldier but also to ensure that he can sustain himself. Technology can do that, too. The space program has given us compressed, dehydrated or paste concentrate meals, high in nutrition and the calories an infantryman must have. Frederick's regimental and army supply trains (and ours) can come to a halt, but the light infantryman can still sustain himself, supplementing his needs from the land if necessary and, most important, carrying in a pocket enough meals for many days. To protect and shelter him, the modern infantryman's bivouac outfit would be similar to that of backpackers and other outdoorsmen.

General Braddock teaches us that light infantry can cover an advance, protect the front, and find the enemy. Technology can make that lesson apply to the light infantry force. Today's night vision goggles and tomorrow's improved versions of them will allow the light infantry to be an all-weather, day-and-night, combat capable fighting force. And if protected by the terrain and the weather, that force can be even more effective.

General Hutier's tactics teach us that firepower, if correctly applied by a fast-moving infantry force, can be a key to overcoming complex enemy entrenchments. More significantly, the historical effect of the German successes reminds us

that during battle, events have a way of developing in an unexpected way. Fast-moving infantry could get into a situation in which ammunition resupply, or any resupply effort, could be delayed or never come at all.

Technology to the rescue again? Yes, with the introduction of the German G11 assault rifle (or some similar weapon), the problems of ammunition resupply, marksmanship, firepower, and sheer weight might be solved.

The G11 is a small, light, gas-operated assault rifle with three firing modes: single shot, controlled burst (three rounds), and fully automatic fire. The weapon is chambered for the innovative 4.7mm caseless ammunition and has a magazine capacity of 50 rounds. Equip this rifle with the futuristic "razerscope" (a combination radar-laser-infrared sight with a microprocessor that provides accurate aiming and rangefinding even in bad conditions) and the light infantryman has the firepower and accuracy that the German *jaegers* and storm troopers tried to achieve. And the G11 rifle's caseless ammunition allows a soldier to carry three times the basic load he now carries. Going into battle with a modernized combat load has an important bearing on the energy tomorrow's infantryman may be called upon to expend.

Finally, General McNair gives us a hard look at tactics, equipment, research, and doctrine for advancing the concept of the light infantry force. The discussion of whether light infantry, as a viable force, is right or wrong is moot. History is on its side.

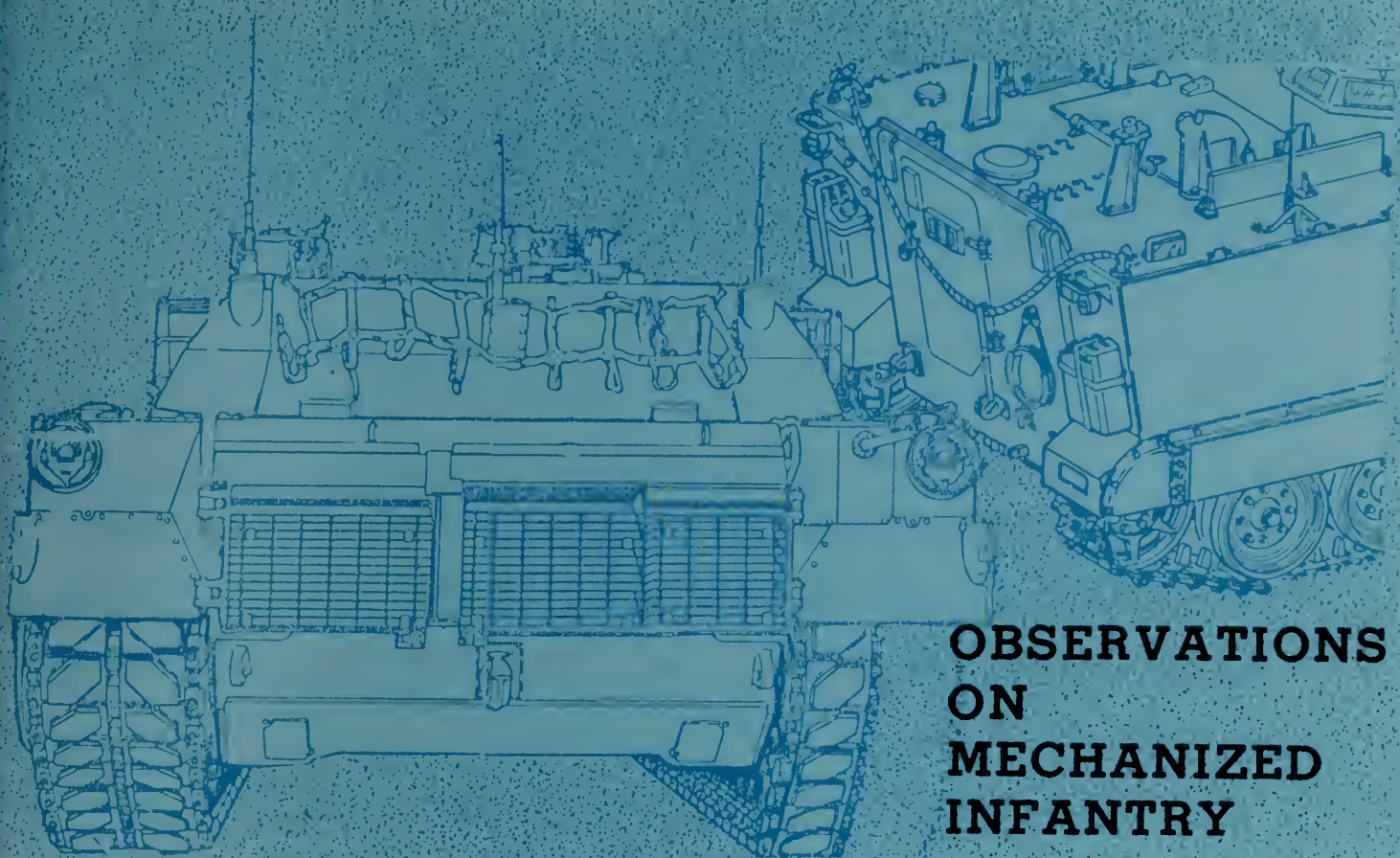
We must glean from history the lessons that can give energy and direction to the light infantry force, because both energy and direction will be needed to carry out the dictates of our national policies. We must all see to the nurture of this force, because the time for deploying it could come sooner than we expect.



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## OBSERVATIONS ON MECHANIZED INFANTRY

SERGEANT FIRST CLASS JOHN E. FOLEY

There's a big difference between light infantry units and mechanized units. I knew that. But after 10 years of experience in light units—light, conventional, airborne, and Ranger—my first assignment to a mechanized unit (equipped with the M113A1) was a challenge. I had a lot to learn. The only thing to do was to grab the field manuals and technical manuals, get into the motor pool and out in the field, and learn mechanized infantry from the ground up. (I also picked the brains of my First Sergeant, who helped me write this article.)

During this learning process, being a senior NCO, I was able to compare mechanized infantry to the light units I had served in and to look at it perhaps with a fresh view. Nothing is ever perfect, and seeing what I have seen, and thinking about how it might be made better, I want to share some of my observations and to challenge my fellow infantrymen to think about ways to improve our profession—tactically and technically.

The single most impressive aspect of mechanized infantry, compared to all the other types, is the firepower available to a platoon and the amount of ammunition it can carry. Having hoarded ammunition for years, since what I carried was all I would have, the idea of having plenty now is exciting. But how do we use it to our advantage without wasting it?

Machineguns provide the bulk of a mechanized platoon's firepower. With the 900 to 1,200 rounds per gun that can be carried easily, the platoon has staying power in a firefight. The main problem I have seen with firing the machineguns while mounted has been their lack of accuracy. The .50 cali-

ber M2, for example, is our main weapon, but it is either locked into position or is a free gun, held and controlled only by the gunner. At certain angles its barrel comes perilously close to the head of the driver, and its accuracy is poor.

The M60 machinegun is either held loose over the side or, better, is mounted on its tripod and the tripod then lashed to the side of the vehicle. It is more accurate when it is tied down, but it can then fire only to one side of the track, and dismounting it from the track takes longer.

Tactically, it is dangerous for the gunners of both the machineguns to expose themselves, because they are then subject to enemy counterfire. (I have always been taught to take out machineguns first, and the enemy probably also considers it sensible to take out machineguns that are firing at him.)

Another problem associated with enemy fire is how helpless mechanized infantrymen are when they come under enemy artillery fire or chemical attack. They can button up, of course, but when they do they are blind, and they cannot fire their machineguns from under cover. (This is a great weakness of the M113.)

Considering all this, are the machineguns we are equipped with now what we really need? The Bradley will solve most of these problems, but we will not see the Bradley totally fielded for a few years yet. We therefore need to improve our capabilities now with what we have.

The .50 caliber machinegun is notorious for its inaccuracy when fired on the move. This was demonstrated during my unit's mechanized gunnery training and at the NTC, when



only one or two men could effectively handle the gun while firing on the move, and both of those men were unusually big and strong. Then again, "effective" is a relative term. But they kept their bullets in the general direction of the targets, which was better than the other men could do.

We need a much better mount that will let the average soldier control his weapon effectively, keep accurate fire on the target while moving or at a halt, and fire from under cover.

Many attempts have been made to solve this problem. The M59 series of APCs had a turret for its .50 caliber machinegun. Various turrets have been mounted on M113s with guns ranging from 7.62mm machineguns to 76mm cannons. To keep things simple, it should be possible to incorporate the .50 caliber mount from an M1 Abrams tank into an M113. This would give a gunner better control over and accuracy with his weapon, and still enable the gun to be fired (but not cleared) from under cover. With the .50 caliber SLAP (sabot light armor-piercing) ammunition (which gives the .50 caliber a more effective round to use against Soviet HIND gunships and BMPs), we may have an answer that will be cheap and effective, at least until we can get something better.

Should we stop here, though? The .50 caliber is an excellent weapon; it gives good firepower for its weight, and we can carry a lot of ammunition for it. But is it enough?

A mixture of weapons is normally better than just one type, and it may be possible to incorporate another type of weapon into the platoon. What I am referring to is the 40mm Mark 19 grenade launcher. During the Vietnam war, a similar weapon was found to be superior to the .50 caliber, particularly in ambush-busting.

Think of it—two .50 calibers in the platoon to pin the enemy down with tracers and high velocity rounds, and two 40mm grenade launchers! The two weapons could complement each other, and while resupply headaches might increase, the results would be worthwhile.

## OTHER SOLUTIONS

There are other possible solutions: A soft-recoil 30mm cannon that combines the best of both the .50 and the 40mm is one. Less ammunition could be carried, but it should be more effective against the threat we face today. There have also been tests on a new turret for the Bradley that would house a 35mm gun, and one has been tested on an M113 hull as well. This could solve a lot of firepower problems, giving us an effective 35mm gun for AP or HE roles, and a coaxial 7.62mm machinegun to use against troops.

Our current 7.62mm M60 is a pretty fine piece; I have used it for years and it does a good job. It could be lighter, and there is a new lightweight version out that weighs little more than an old Browning automatic rifle. What we need, though, is a way to make our M60s more effective. The Israelis use pintles on the sides of their APCs which provide stable and accurate mounts for their 7.62mm machineguns firing off the sides of the tracks. We used a similar system on the armored cavalry fighting vehicles in Vietnam, and it was effective. Instead of lashing the tripods down on one side or

the other of the M113 to get a stable firing mount with good traverse from the sides of the tracks, I would rather see two M60s carried with each squad and have pintles for mounting them on both sides of the M113, so as to cover both flanks. I would use the M60s for mounted work and leave them with the track most of the time, using our SAWs when we dismount (whenever we get them). I want to keep the M60s since they can fire good armor-piercing rounds for use against light vehicles, as well as incendiary and tracer rounds.

By having two SAWs and two M60s as standard equipment with every track, plus a .50 caliber or larger weapon, we would also have enough firepower in the defense for a squad to hold off a platoon or better by itself, assuming we could man them.

Currently, we also have the M901 ITV for our heavy long-range fire support, and it is a good system. At the company and platoon levels we have the Dragon missile system and the M72A2 LAW. (Nobody is really happy with the Dragon.) These are also the weapons we have for bunkers and other hard targets. The LAW is due to be replaced by the 84mm AT4, which from my readings should be a fine weapon for us to have, with excellent effect against any bunkers we may encounter.

Although HEAT rounds do a pretty fair job of putting holes in things, they are not the best thing to use on a bunker. We need something that will put a satchel charge right into the bunker, and there are things on the market that will do it.

Speaking of the Dragon, I would rather have something along the lines of a true fire-and-forget system. Give us an unguided round or recoilless rocket, accurate enough to kill at 1,500 meters, and then train the gunners to shoot it. Technology cannot make up for skill. We need something simple, powerful, accurate, and cheap. Another weapon that could be fired from a cupola mount or adapted to a tripod for accuracy would be a great boon. In short, we want something to kill tanks and other armored vehicles with, and if it is also effective against helicopters and bunkers or buildings, so much the better.

Incidentally, we do have the M202A2 four-barreled 66mm launcher, for firing incendiary rounds. It's an interesting weapon, like four LAW tubes glued together. We have not used it much in my unit and have conducted no training with it, aside from what I give my platoon with no ammunition. This is a pity. It's another good weapon we should train our troops on so that they can take advantage of its characteristics.

To do that, we need to get beyond the "TASK, CONDITION, and STANDARD" in the Soldier's Manuals. The Soldier's Manuals are excellent for teaching the basics, but they give little thought to the advanced techniques. For example, the M202A2 is good for bunker-busting, burning wood bridges or buildings, and forcing tanks to button up, or their occupants to panic and dismount.

Flame is one of the oldest weapons in the inventory, and in mechanized infantry we can carry the materials needed to make improvised flame weapons — soap powder, containers, and the like. By using the lessons from past wars, we can train our troops to make the most of flame weapons, both issued and improvised.





**It does not really matter what the rifle is as long as soldiers get good, continuous training with it.**

As for indirect fire, at the NTC this year I really missed the company level mortars my light units had. Even a couple of 60mm mortars would have been a great help, especially with illumination at night.

There is a basic flaw in reducing the number of mortars in an infantry battalion from 13 to 6. Six mortars can cover a maximum of six targets at a time. I know about target lists and priority targets, but what happens if a squad on outpost gets hit and no fire support assets are available? With company mortars always at company level, we never lost the support. Give every platoon a 60mm mortar, train the men to use it, and let us go at it. Add two men to the platoon headquarters as mortarmen, and so much the better. The platoon leader or platoon sergeant could control them. The benefit in firepower would be worth the investment.

At battalion level I would rather see a mortar company composed of 12 guns, or four three-gun platoons. The new 120mm mortar the Army is getting is a fine weapon, but my reasoning is this: Each line company needs fire support. A mortar platoon per company for fire support, particularly with the new GAMP round, would give us the firepower edge over any enemy we might come up against.

If 12 guns is considered excessive, why not increase the present number to eight mortars? That would give us four

two-gun sections, which would give every company some measure of fire support but still allow for the massing of fires when necessary.

This brings me to individual weapons. I have carried quite a few rifles in my time—M14s, FN FALs, G3s, AKMs, and even M16s. I was originally trained in high school with the M14, and I appreciate its fine accuracy. No matter what my own preference is, though, the M16 is what we have, and it is about as good as the other weapons that are touted as being better. But a soldier needs to believe in his weapon, and the M16 does not give him a lot of faith. It jams on him too often no matter what he does, and most M16A1s are pretty worn out. (The jamming is often blamed on bad magazines, and although research is going on with plastic magazines to correct this problem, the doubts are still there.)

The M16A2s I saw the Marines carrying at the NTC impressed me. The M16A2, particularly with the optical sight that is being tested, should cure most of the ills of the M16A1, but it will take a battle to prove to our soldiers that their weapons are the best. (Also, we would be better off if we issued only semi-automatic rifles, with good triggers, and got rid of the gimmicky three-shot burst on the M16A2. For firing at aircraft, a three-round burst is not enough; for ground targets it is a waste of ammunition.)

This gets to my final point about rifles. It does not really matter what the rifle is as long as soldiers get good, continuous training with it. But firing 40 rounds a year does not make a man a good shooter.

Using MILES is not good enough. A soldier needs to fire



live ammunition to get a feel for his weapon, know its zero, and be confident that he can hit his target! Nothing can replace rifle practice with live ammunition on ranges where the firer has to maneuver and shoot, and shoot to hit from every position imaginable. Target shooting is fine and an excellent start, but then we need to progress and teach our men to kill other men, quickly and efficiently, with a rifle.

Submachineguns and carbines are usually very popular weapons when they are available. They look sexy and mark the soldiers who carry them as somebody different. But I believe they should be left to the special operations types who are trained to use them.

There are exceptions, of course. I believe drivers and track commanders should carry rifles in their tracks; then, if a track is disabled and the two have to dismount, they will be armed like everybody else. But they need something more, something they can carry in chest holsters, independent of their LCE so that they will be armed all of the time. A good candidate for this is Beretta's 93R, which is a compact, controllable, submachinegun that would be little burden to the supply system, because it is almost identical to the model 92 pistol recently adopted by the Department of Defense. It is also accurate and effective out to 100 meters, which means we would have another weapon to train with, but it beats having men killed because their weapons are out of reach.

The grenade launcher is another important weapon in a mechanized infantry unit. The M203 has its faults — one shot, not as accurate as the M79, and the grenadier has a tendency to forget his grenade launcher and fire only his rifle. The M203 is a rather fragile weapon, too, judging by the amount of time mine spends in repair.

We still have to contend with the "loss" of a rifle from the squad. I think the firepower of two grenade launchers would make up for it. The grenadiers would stick to their primary job of grenading things. They, too, could carry Beretta M93Rs, which would give them effective short-range firepower without overburdening them.

Every man in the squad should carry extra grenades for the grenadiers — if you have to break contact, it is easier to do with a barrage of high explosive rounds that make the enemy think he is getting hit by artillery.

## PROTECTION

Aside from all this firepower we have, we also need to be aware of the fire coming at us. While we need all the firepower we can get, we need additional protection, too. What I am referring to is the flak vests issued to ground troops together with the Kevlar helmet. The helmet will stop bullets, but the vest itself is good only against fragments. Surely we can give our soldiers better protection and less weight than we are giving them now.

On the M113 itself, the latest version, the M113A3 (as described in the September-October 1985 issue of *INFANTRY*, page 8), has the fuel tanks on the outside, a more powerful engine, and fixtures for mounting Kevlar blankets to increase the survivability of the troops inside. We still



We still have the problem of trying to fight from the carrier.

have the problem of trying to fight from the carrier, however, and since we will have the M113 series well into the year 2000, this is something we should consider.

Now, with the cargo hatch open, the troops in an M113 are vulnerable to air-burst artillery fire, and when they button up for NBC attacks, they are blind and helpless. It also takes precious seconds to close the cargo hatch.

A possible solution would be to install light tubular framing around the cargo hatch and cover it with a ballistic blanket of Kevlar. This would keep the weight down, offer better overhead cover than we have now, and, if large firing ports were left in the sides of the blanket, would enable us to continue to observe and fight even in MOPP-4.

Another modification that could be made is to put an observation port in the troop door of the M113A3—the same kind used on the ITV (improved TOW vehicle).

In my unit, NBC training is tough and realistic. We spend a lot of time in MOPP-4 and practice buttoning up and masking every time we get hit by air or artillery. In addition to being blind when buttoned up, when we mask we cannot aim and fire our rifles accurately. With the M17 or M25 series masks, we either point and hope or pull our heads back to the heel of the butt in a vain attempt to get a good sight picture, but then our zeros are off since we are seeing the sights from a distance. We also have problems with masks fogging up and with making ourselves understood over a radio, or understood at all.

There are new masks coming out, and I can only hope they will solve these problems.

Warfare is now a 24-hour proposition, and we need all the night vision we can get to enable us to fight as effectively at night as during the day. We still need more practice in night operations, and we should have a more liberal allowance of night vision devices.

The AN/TVS-5, our main crew-served night vision sight, is a wonderful device — when it works, but it seems to blink out fast. A tracer will still burn it out, or the reticle will not light, or the picture will just go blank. I had the same problems with TVS-5s in light infantry units, so obviously it is a problem that needs correcting.

Individual sights for grenadiers and riflemen are also needed. In fact, I would like to see something small and light



enough to issue to every man in the squad. But if we can't do that, then we should spend more time shooting at night so the men will be more confident in their ability to react to and suppress enemy fire at night.

## LOGISTICS

Logistics is definitely a problem in mechanized units. All we have in the company for transportation is a two-and-a-half ton truck and a quarter-ton jeep with a trailer. Jeeps and trucks, no matter how good the intentions, cannot keep up with a tracked vehicle or cross the same terrain. Besides, jeeps are going out of the inventory, and my First Sergeant's jeep was transferred to somebody else whose jeep had been coded out, leaving the First Sergeant with only a truck for company logistical support.

The support platoon? It is too overworked now. With the distance between companies and the amount of material required, we end up attaching men to the company headquarters from the line platoons just so we can accomplish our missions. The supply sergeant needs at least three men to make a four-man company logistical unit, which would give him the manpower he needs to load and unload supplies and move them from the combat trains to the line platoons. The First Sergeant needs a driver and a radio-telephone operator assigned to him as part of the headquarters. He also needs a vehicle that can keep up with the tracks — either a stripped-down M113 or an M548, something that can carry a great deal of ammunition and food and keep up with the company. HMMWVs (high mobility, multipurpose wheeled vehicles) will not be able to do this — a tracked cargo vehicle is needed. If we give the company headquarters section the men and vehicles to accomplish its mission, we will not have to take riflemen from the line platoons to keep the supplies flowing.

A final item for discussion is communications. Our mounted radios are pretty good. Sometimes a radio will blink out after a hard jolt, and the new disposable mikes do not last long, but, overall, we get the job done.

We tend to be overly dependent on our radios anyway. We need to use them in a more disciplined, frugal manner. Repetitious orders only relay fear and uncertainty, and too many "radio checks" by people who are nervous and just want to be reassured someone is there can easily pinpoint for the enemy a unit's location within ten meters.

We have found that flag signals, hand and arm signals, and SOPs are better for controlling our tactical movement. These signals can be seen by everyone as long as there is visibility, and they should be used as much as possible.

Dismounted communications are not as good. Mechanized

infantry units are issued only obsolete squad radios, two-piece AN/PRC-88s, which have not worked well in any unit I have ever been in. This radio has a short battery life, is fragile, goes out at the worst times, is not compatible with the AN/PRC-77s, and generally is not worth the trouble it causes. Besides, it is unbalanced and awkward.

Some units have the AN/PRC-68, which is slightly better, but it does not do a good enough job either. Fortunately, better radios that will solve these problems are in the works.

We have taken steps to make the most of what we do have in my platoon by drilling with hand and arm signals, by using mirror or flashlight/pyrotechnic signals, and by converting one of our AN/GRC-160s into an AN/PRC-77 mode for dismounted operations. Thus, we have been able to control the dismounted squads and the carriers at the same time. Of course, all of this requires practice, but it enables everybody to know what to do in advance; then there is less need for verbal communication.

Mechanized infantry held a lot of surprises for me. Its tactical mobility is something that amazes me. The ground it can cover in minutes takes light infantry on foot hours to cross (without opposition). This tactical mobility, the ability to bypass impassable terrain (of which there is actually very little), enables us to move faster and arrive fresher than any light infantry in the world.

We can carry more ammunition, enabling us to fight longer; more food and water, enabling us to stay longer; and barrier material, making us harder to dig out.

There are some disadvantages to the mechanized infantry, of course. It makes a lot of noise. It needs a heavy logistical tail, because it has to be kept supplied with oil, water, ammunition, and parts. As reliable as the M113s are, they do break down, and after a few weeks in the field we start having serious maintenance problems from the strain on the equipment.

One of the biggest lessons I have learned is that mechanized infantry is not roadbound — where there are no roads, tracks, tanks, and engineers can make them.

With our equipment, our firepower, our speed, we can accomplish any mission given to us, but these things are not substitutes for leadership and training. We need to challenge ourselves to make the most of what we have now. Above all else, we need to train our men to fight, mounted and dismounted, with everything they have.



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# TRAINING NOTES



## Dragon Maintenance Management

CAPTAIN G.A. SILVERMAN

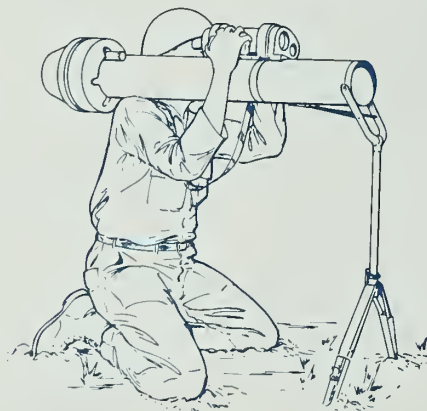
The Dragon missile system is the primary antiarmor weapon in all infantry rifle companies, yet it and its related training equipment are among the most neglected items when it comes to organizational maintenance. All too often, services are behind schedule, maintenance records are nonexistent, and Dragon training equipment sits untouched in a corner of the arms room.

There is a significant lack of understanding of how to maintain missile equipment at company level. This is compounded by the fact that none of the schools that company-grade infantry officers attend — IOBC, IOAC, and the Maintenance Officer Course — teach anything about managing missile maintenance.

Dragon organizational maintenance includes many component tasks, and there is a great deal for a company commander to check to see that all the necessary tasks are accomplished.

First, commanders must be aware that the Dragon missile system is a "pacing item," which is defined by AR 220-1 (Unit Status Reporting) as "a major weapon system that is central to an organization's capability to perform its designed TOE/MTOE mission," an item that is "subject to continuous monitoring and management at all levels of

command." A pacing item is a limiting factor in determining a battalion's equipment status rating on the Unit Status Report. Thus, that rating cannot be higher than a unit's lowest rating on a pacing item. This makes a pacing item one of the most critical in a rifle compa-



ny, but it is surprising how many captains and lieutenants have never heard the term.

The reportable components of the Dragon system are the tracker (GM Infrared SU-36/P); the night vision sight (AN/TAS-5); the guided missile and launcher (M222/223); and, for mechanized infantry units, the night sight vehicle power conditioner and the mount (M175).

These components are reported to Department of the Army through the Missile Materiel Readiness Report (DA Form 3266-1). If any of them become inoperative, the entire system must be reported as "not mission capable" for that period.

Dragon training equipment—the monitoring set (AN/TSQ-T1); the launch effects trainer (GM M54); the infrared transmitting set (M89E1); and the field handling trainer (M57) — is not reportable to DA. Nevertheless, managing training equipment is as important as managing the weapon itself because effective training cannot take place without it.

One of the biggest misunderstandings regarding missile systems involves organizational maintenance, which for the Dragon is performed at company level and consists of the following activities:

- Keeping historical records (TAMMS).
- Performing preventive maintenance checks and services (PMCS).
- Scheduling required direct support (DS) maintenance services.
- Making repairs within the scope of the owning unit.
- Evacuating inoperative equipment to direct support maintenance units.

To manage his Dragon maintenance program efficiently, a company com-



mander must check several things to make sure the critical organizational maintenance activities are being performed (see checklist). And before any maintenance can be performed on the Dragon or its equipment, the unit must have the following publications:

- TM 9-1425-484-10 (operator's manual for the Dragon weapon system).
- TM 9-6920-484-12 (operator/organizational maintenance manual for Dragon training equipment).
- TM 9-6920-480-24P-1 (repair parts manual for Dragon training equipment).
- TM 11-5585-254-14&P (operator's manual for battery charger (PP-7382/TAS)).
- DA Pamphlet 738-750 (The Army Maintenance Management System).
- AR 750-40 (Missile Materiel Readiness Report).
- External SOP of the company's direct support maintenance battalion.

Certain records also must be maintained for each component of the Dragon system, and the unit armorer is the man who should maintain them. He must read and understand DA Pamphlet 738-750. (The records required are listed in Appendix E of that pamphlet.) The company executive officer should supervise the entire company maintenance program and make sure all records are accurate and up to date.

## DS MAINTENANCE

Periodic services on the Dragon must be performed by the DS missile maintenance unit. Again, the unit armorer is the key man in making sure these services are not overdue, and the company XO should closely monitor the scheduling of services for all weapons.

Operational tests must be performed quarterly on the tracker, the night tracker, the monitoring set, and the launch effects trainer (LET). In addition, the LET must be disassembled and cleaned semiannually.

If the DS contact team performs these services at the unit, the armorer must make sure the team notes the services on the appropriate TAMMS form. Although no DS services are required for the transmitting set, it should also be

## Dragon Maintenance Management Tasks

Dragon Organizational Maintenance Activities	Company Commander Checks	Reference
Maintain historical records.	Inspect records.	DA Pam 738-750.
PMCS.	Check equipment returned to arms room after training.	Operator's Manual.
Schedule semiannual/annual services to be performed by DS maintenance unit.	Ensure that services are scheduled and completed services are recorded.	DS External SOP.
Evacuation of equipment to DS maintenance.	Ensure that items are evacuated in a timely manner.	DS External SOP.
Stock parts and supplies authorized for organizational maintenance.	Check parts/supplies on hand. Verify document numbers for items on order.	Expendable Supplies Appendix of Operator's TM, Repair Parts Manual.
Readiness reporting.	Ensure that not-mission-capable systems are promptly reported by component to battalion.	AR 750-40.

checked by DS at least semiannually or before training. It should also be noted that the transmitting set and its power supply modulator are a matched pair; their power output must be adjusted and matched to each other by the DS unit at least semiannually or before training. Once they have been matched, both components should be labeled so that they remain matched. If one of the pair is turned in for repair or exchange, the other must accompany it for readjustment.

Organizational maintenance, by definition, is done at company or battalion level. The DS unit cannot be expected to perform repairs that are authorized at organizational level or to order parts. Certain expendable supplies (desiccant to absorb moisture in the monitoring set, air filters for the IR transmitter) can be ordered and stocked at company level. These items are listed in an appendix in every operator's manual and must be on hand or on order at all times. PMCS cannot be performed properly without them.

As for the Dragon training equipment, it is among the most expensive, yet neglected items in any infantry unit.

Typically, this is what happens: The equipment sits in the arms room, sometimes in the HHC, until a company must run a Dragon training range. (The armorer does not maintain it, because he has no publications or no training in how to maintain it — or he does not even know what the equipment is.) The equipment goes to the range where it is found to be inoperative, and the cry goes out for the DS missile maintenance contact team. The team rushes out to the range only to find that the monitoring set's batteries have not been charged, it is full of moisture because the desiccant has not been changed, the LET has not been cleaned since the last firing, and the IR transmitter is not putting out signals because its air filters are clogged.

The way to correct this situation is simple. The commander must see that the manuals are read and followed, designating personnel to maintain the equipment and holding them responsible by checking periodically.

Before he can hold them responsible, however, he must see that everyone involved has been properly trained, especially the pivotal man, the armorer. (The average armorer, MOS 76Y, has

received no training in maintaining missile system equipment.) Obviously, operators and supervisors also must be trained before they can do any PMCS, and the company executive officer must be trained in missile equipment maintenance if he is to supervise the unit's program.

Maintaining missile system equipment is not essentially different from maintaining vehicles, small arms, or radios in regard to publications, records, repair parts, personnel, training, and time. The most important factor, however, is command emphasis, which brings all the other factors together to produce an

effective maintenance program and a combat-ready unit.

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# Light Infantry Weapons Squads

**CAPTAIN WILLIAM E. HARNER**

Over the past two or three years, various agencies and subject matter experts have been developing organizations and doctrine for the Army's new light infantry divisions.

The 7th Infantry Division (Light), which converted to the new configuration toward the end of 1985, has become a member of the Rapid Deployment Force and has been involved in an extensive one-year certification process to validate light division concepts.

For light infantry units, one of the most important certification issues is to determine the most effective organization for employing M60 machineguns and medium antiarmor weapons (Dragons) in the rifle companies.

Eight of the nine infantry battalions of the 7th Division are formally organized under the current table of organization and equipment (TOE), with the Dragons consolidated in an antiarmor section under the company headquarters and with two machineguns assigned to each platoon headquarters. During its train-up period before receiving 333 graduates from One Station Unit Training (OSUT), the other battalion—the 4th Battalion, 17th Infantry—was chosen to implement the weapons squad concept instead.

A weapons squad consists of nine men

with two Dragon teams and two machinegun teams under the control of a staff sergeant squad leader. Each of a company's three rifle platoons has one weapons squad.

The personnel and equipment to form the weapons squad came from the current antiarmor section and the rifle platoon machinegun crews. The weapons squad does require two additional staff sergeant squad leaders per company over the existing personnel authorizations.

## SQUAD LEADERS

In organizing their weapons squads, the company commanders chose their weapons squad leaders carefully, looking for maturity, experience, initiative, and technical proficiency in both the M60 machinegun and the Dragon. The NCOs selected for these positions included former antitank platoon and section sergeants, a two-time captain of the winning team in an M60 machinegun competition, and several Vietnam veterans.

These weapons squad leaders, as members of the COHORT battalion cadre, then attended the Light Leader Course taught by Fort Benning's Ranger Division. The program of instruction, which was based

on Field Circular 7-15, Light Infantry Squad and Platoon Operations and ARTEP Mission Training Plan, had to be modified slightly to work with the weapons squad in platoon missions. This was an easy adjustment, however, because Ranger companies have weapons squads in their TOE.

By the time the course ended, several things were clear:

- The leader-to-led ratio was obviously better with the two additional NCOs. The weapons squad leader was responsible for only eight men instead of 12 as in the antiarmor section configuration.

- The weapons squad made NCO supervision of the M60 machinegun crews easier, thereby freeing the platoon sergeant to help the platoon leader lead the platoon.

- The internal configuration of the weapons squad could be arranged into mutually supporting teams, which had one machinegun crew and one Dragon crew each.

- The weapons squad leader became the assistant platoon sergeant.

The selection of soldiers to man the weapons squad was competitive. Before they graduated from OSUT, their individual training records were screened for their weapon qualification and Army Phy-



sical Readiness Test scores, and for their overall performance as shown by an informal critique the OSUT drill sergeants provided.

The relationship between the squad leaders and the drill sergeants, in particular, proved invaluable in getting the weapons squad training program off to a fast start. Also, each weapons squad leader in the battalion had an unprecedented opportunity to observe future members of their squads for a fifteen-day period during an OSUT add-on evaluation at the Army Training Center at Fort Benning. (The low attrition rate in the weapons squads over the next seven months was a direct reflection on the selection process.)

Once the battalion had been fully assembled at Fort Ord, an intensive six-month training cycle began. This period included the Rites of Passage; the light fighters course; squad, platoon, company, and battalion ARTEPs; and battalion training in Celtic Cross III, the division's annual "war." (See also "COHORT Company Training Program," by Lieutenant Colonel Joseph C. Windle and Captain Harold E. Raugh, Jr., *INFANTRY*, November-December 1984, pp. 26-29.)

Although the learning process continues for the battalion, some conclusions can already be drawn.

Foremost among these conclusions is that light infantry doctrine has not caught up with the TOE force design. The Army Chief of Staff's White Paper on Light Infantry requires that our infantry forces become experts in low-intensity operations in which "initiative, stealth, and surprise" are paramount. The lack of a formidable armor threat in a low-intensity conflict develops an undefined role for company Dragons (there is little use for them in attacks by infiltration, air assault, ambush, or raid).

In low-intensity warfare training, even the companies of the battalions organized under the regular TOE either have used their antiarmor sections in an informal weapons squad configuration or have used them out in front as reconnaissance forces. (Although this is only a technique, it is well documented that the Dragon gunner's skill is already highly perishable without putting the well-trained gunners and their weapons out front as regular infantry forces. Integrating antiarmor section per-

sonnel into platoons as rifle assets on a mission-by-mission basis only fosters confusion.)

The weapons squad configuration gives a commander more flexibility if the conflict should intensify, or in the event his unit is introduced into mid- or high-intensity operations. During the 7th Division's annual exercise in 1985, the brigade commander successfully took the 4th Battalion, 17th Infantry's TOWs and Dragons and attached them to another battalion that had an armor threat in its sector. Further, during company raid and stalking attack missions the weapons squads received additional machineguns and acted independently under the company commander's control, while the Dragon crews remained with their squads to provide local security. In an elastic defense, the Dragons were brought forward from the company trains and the weapons squad teams were set into mutually supporting positions. This flexibility can be directly attributed to the supervision provided by the leaders of the weapons squads.

The weapons squad provides the ideal responsiveness and concentration of antiarmor and machinegun firepower on the most likely enemy avenues of approach into platoon defensive sectors. Cross-training teams on both weapons should therefore be the rule, not the exception.



Then, when his teams are deployed, a company commander can be assured that his crew-served systems will be correctly manned at all times. (The addition of the squad leader and Dragon crews also increases the foxhole strength of each platoon by five riflemen who are fully versed in platoon SOPs.)

Finally, in low-intensity situations, Dragon crews can be used as security teams for platoon missions, and the platoon's rifle squads will remain intact for the assault element.

The hallmark of light infantry units is their ability to conduct bold, aggressive actions anywhere in the world at any time. It is therefore incumbent upon our Army leadership to provide the best configuration for its cutting edge.

The weapons squad has proved its usefulness in the most demanding training through the flexibility and responsiveness it has given its commanders and through the punch it provides as a combat multiplier. It should be a part of the TOE of a light infantry rifle company.

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# Iron Squad Stakes

CAPTAIN CHARLES W. PAXTON  
LIEUTENANT JOHN S. WEAVER

An INFANTRY article entitled "MILES Game Equals Training" (January-February 1985, pp. 39-42) described the merits of a squad MILES competition developed in the 3d Infantry Division. That game is credited with inspiring further development of this kind of training in the 1st Armored Division. We call our version the Iron Squad Stakes.

The Iron Squad Stakes incorporate three distinct scenarios—open field, MOUT, and woodland—into one complete package. This three-pronged approach is a simple but important modification of the 3d Division's game. While it is important that dismounted infantrymen learn to fight on open terrain, it is imperative that they be proficient in wooded and urban areas as well. This is especially relevant to the U.S. soldiers stationed in Europe where villages, woods, and open fields abound.

In two of the scenarios—a meeting engagement in a woodland environment and a meeting engagement on an open field—the objective of each squad is to decisively engage and defeat another in a head-to-head confrontation. In the MOUT scenario, a squad is required to assault a building that is defended by a three-man sniper element. This contrasts sharply with the 3d Division's game in which the squads are assigned to separate lanes. Again, the modification was intended to increase the training value and the close combat realism of the competition.

One of the best features of the Iron Squad Stakes is the unique scoring system. The participating squads can earn points in two different categories. In the first and most fundamental, points are awarded for each "kill" a squad obtains. In the second category, a squad can earn points for suc-

cessfully performing essential individual and collective tasks. (These tasks, taken directly from the 11B Soldier's Manual, correspond to the appropriate skill levels. Among these critical tasks are Selection of Proper Movement Techniques (071-326-5610); Move as Member of a Fire Team (071-326-0501); Move Over, Through, or Around Obstacles (071-326-0503); Fire Control and Distribution (071-326-5501); and The Squad Leader's Fragmentary Order (071-332-5002).)

By incorporating these fundamental infantry tasks into the scoring scheme, we reward technique as well as success, and positively reinforce current U.S. Army Infantry School doctrine.

These tasks also provide an excellent training tool for our trainers and leaders. With the results from the task scores as well as the "kill" scores, leaders can



Points are awarded for each kill a squad obtains.





**Soldiers must be proficient in woodland areas.**

more accurately examine the reasons behind the successes and failures of their squads.

Here, attention is given to the relative value of the tasks that are scored. Logically, a greater weight should be attached to the number of "kills" a squad gets, because the mission always takes precedence. Accordingly, the scoring ratio between "kills" and tasks is about 6:4.

With these scoring procedures, the Iron Squad Stakes enable companies and battalions to evaluate their TOE squads and rank them from best to worst. If two squads score high in the "kills" category but only one of them does well on its tasks, then that squad is clearly the winner.

But the competence with which these tasks are graded is essential to the legitimacy of the scoring as well as to a successful competition. Graders, therefore, are obviously important. Unless the graders are intimately familiar with the tasks, conditions, and standards involved, they will not be able to render the most accu-

rate scores. Increased familiarity with the graded tasks is also essential to a meaningful after-action review.

These prerequisites make experienced NCOs and junior officers well-suited to serve as graders. Ideally, a commander can use his platoon leaders and platoon sergeants in this capacity. This makes sense, because the participating squads are likely to come from their own platoons. Thus, the leaders and trainers have a big stake in the training value of the competition.

## **SUCCESSFUL**

Competitions similar to the Iron Squad Stakes can be conducted by just about any unit. The 1st Battalion, 52d Infantry ran all 36 of its TOE squads through the Stakes in two days. During this time, the battalion proved that this competition could be conducted successfully on a fairly large scale.

The results of the competition were well

worth the effort it took to make it work. In two days all the key leaders in the battalion gained invaluable information on the dismounted fighting ability of their squads. At the same time, the morale and fighting spirit of the battalion's infantrymen was given a healthy boost.

The competitions demand no fixed requirements. The Iron Squad Stakes were developed so that a commander could build upon or streamline the basic concept. Examples of this would include the incorporation of nuclear, biological, chemical (NBC), or night fighting into the Stakes.

On the other hand, the available resources may limit the amount of ammunition and pyrotechnics that can be used, but these limitations can serve as an additional training tool by introducing the squad leader and the soldiers to the use of fire control and distribution.

Some basic requirements must be met, of course, if such a competition is to get off the ground. In Germany, most of the

U.S. Army installations have access to training areas sufficient for all three scenarios. In other areas, the MOUT site, for example, can be questionable; if so, this can be left out.

Another consideration that cannot be ignored is the availability of MILES equipment. This is the biggest hurdle, because both the realism of the exercise and the objectivity of the scoring process hinge on the MILES gear. (Unit training NCOs can help with it.)

Finally, there is a requirement for 5.56mm and 7.62mm ammunition. In the LOI we developed, the figure arrived at was 80 rounds of 5.56mm per rifleman per scenario and 250 rounds of 7.62mm per machinegunner per scenario, but fig-

ures are only working guidelines. (We will gladly furnish copies of the LOI to anyone who is interested.)

Squad-on-squad competitions are not new, but the Iron Squad Stakes are somewhat different. What the 1st Armored Division has laid out are some practical guidelines to a dynamic competition. The goal was to substantially increase the training value the infantry squads of the division were receiving, and that goal has been realized. The results achieved show great promise for improving squad combat skills throughout all the infantry battalions of the division.

Now it is up to other infantry battalions to take up the challenge and use their own imaginations. This is just a glimpse of

things to come in small unit infantry training, and anyone seriously interested in training should take notice.



**Captain Charles W. Paxton** is a 1976 graduate of George Mason University. He has served as a rifle platoon leader and a scout platoon leader and is now a company commander in the 1st Battalion, 52d Infantry.



**Lieutenant John S. Weaver** is a rifle platoon leader in the 1st Battalion, 52d Infantry. He is a 1983 graduate of the University of Kansas.

## Depth Through Initial Positioning

**CAPTAIN THOMAS P. KRATMAN**

Many of our doctrine experts today seem to be expressing preconceived and ill-reasoned notions of what is tactically sound when they present their views on our new light infantry units and their role in maneuver warfare, particularly their defensive role.

To them, the only threat our light infantry forces can expect to face is the one represented by the heavy mechanized and armor forces of the Warsaw Pact in Europe or those of certain military powers in the Middle East. Therefore, they postulate, because our light infantry units cannot outrace heavy forces in open country, and because they have no protection other than from their fighting positions, a light infantry rifle company can get defensive depth only through its initial positioning of its platoons and weapons, not by maneuver. Any light infantry unit attempting

to maneuver to establish depth in its defensive position would invariably be caught in the open and destroyed.

This reasoning may appear sound for a situation in which light infantry forces are pitted against mechanized forces in country that naturally favors a fast-moving mounted attacker and in which those same light infantry units have not been given enough time to prepare fortifications and obstacles.

### OPPORTUNITIES

But there are many other possible situations, and against mechanized forces there will be many occasions and circumstances in which light infantry units will have an opportunity to maneuver to gain depth in the defense. Once a Soviet motorized ri-

fle division, for example, dismounts, it becomes just another light infantry division with relatively poor training as light infantry and an enormous logistic tail only partly offset by greater organic firepower. The keys to forcing such a unit to dismount are terrain, weather, and time.

Cities, jungles, mountains, rivers, fortifications, muddy open areas, and some desert terrain will force an attacking mechanized force to operate dismounted much or all of the time. These are clearly the types of areas in which light infantry should be employed. Since our senior commanders are neither stupid nor irresponsible, we can predict that light infantry will usually be employed in such restrictive areas or, where such areas are not available, will be given time to fortify extensively. By virtue of a defender's ability to reconnoiter and rehearse routes to



subsequent positions, our light infantry should be able to conduct a retrograde maneuver faster than dismounted enemy mechanized troops will be able to advance.

Most of this kind of terrain provides light troops with considerable protection from an enemy's direct and indirect fires. Cities and fortifications give excellent cover and concealment to troops maneuvering inside them. Mountains negate much of the effect of high explosive fire by increasing range probable errors. Jungles make target acquisition considerably harder. Under these conditions there is no good, general reason for prohibiting light infantry to use maneuver to gain depth.

The United States faces many threats besides the mechanized one around the world. These threats range from the mass infantry armies of China, Vietnam, and North Korea to the rebel groups of Cuba, Nicaragua, and various Central American nations. Such armies have little if any advantage over our light infantry in either speed or firepower. The only advantage they are likely to enjoy will be having vast numbers of soldiers at the point of decision. This is similar to the advantage the Warsaw Pact forces will hold in West Germany against our mechanized forces. There, our mechanized units on an open battlefield will often use maneuver to get to subsequent positions and to avoid decisive engagement. Similarly, our light infantry forces should use maneuver fre-

quently to move to subsequent positions they have prepared in depth throughout their sectors to avoid being swamped by greatly superior numbers of equally slow-moving light infantry.

Against such enemies it will be possible to maneuver to positions in depth without fear of being caught in the open. Their firepower in the attack will not normally be able to pin more than a fraction of our units in place, given their relatively austere heavy equipment levels and resupply capability. Without such capability on the part of the light threat, there should be no basis for the injunction against maneuvering in the defense to gain depth.

Throughout most of World War I the defensive doctrine of the various combatants was in complete accord with our current doctrinal teachings. The German Army was the first to break out of that very confining method of operation. At a time when artillery dominated the open ground in a way seldom equalled, the Germans used maneuver in the defense to shift units in depth and made the Allies pay heavily for every yard gained, thus making conditions suitable for a counterattack. The Allies, on the other hand—neglecting defensive maneuver when under German attack—held their positions without maneuvering, relying on their initial positions only. As history shows, the units that employed such tactics against German infiltration tactics were bypassed, cut off, and destroyed piecemeal. They could have

maneuvered to avoid this fate, but their particular dogma—like ours—forbade it. These German infiltration tactics are still the basis of almost every sound offensive tactical doctrine in the world.

Do light infantry or dismounted mechanized troops move faster than the infantry of 1917? No, they do not. Does artillery dominate the ground more than it did in 1917? No, it does not. Will our doctrine, then, work better than it did for the Allies in 1917? No, it certainly will not.

Of the possible variations in METT-T likely to be found by light infantry on a future battlefield, the largest number, and the most likely, would allow for light infantry to use maneuver to gain depth in the defense. Whether against mechanized forces that must dismount to clear obstacles and buildings or against enemy light forces in a jungle, our light infantry will frequently be able to affect vast enemy numbers by maneuvering to subsequent positions in depth.

Doctrine will never be a substitute for a good analysis of METT-T. Our present doctrine, by taking such an absolute stand on the matter, is a bad substitute.

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**Captain Thomas P. Kratman**, an Infantry officer, is assigned to the 2d Battalion, 21st Infantry at Fort Stewart. He is an ROTC graduate of Worcester Polytechnic Institute in Massachusetts and has served as a platoon leader and a rifle company executive officer in Panama.

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# Taking the First Hill

GEORGE G. EDDY

Let's assume you have just taken command of a battalion under less than favorable conditions and you don't know anyone in it. Your superior has told you that, while he does not want to influence your judgment, he wants you to know he has not been happy with the battalion's per-

formance; it is clear he expects you to "turn things around."

You are about to take on that first hill.

Let's assume, too, that you have already met with your subordinate commanders and have outlined for them in broad terms what you expect from them

and what they can expect from you. Now you are ready to meet with each of them in private sessions to pass on your detailed guidance and to elicit from them information about their particular units.

To do this properly, you should select a "neutral" meeting place, so that your

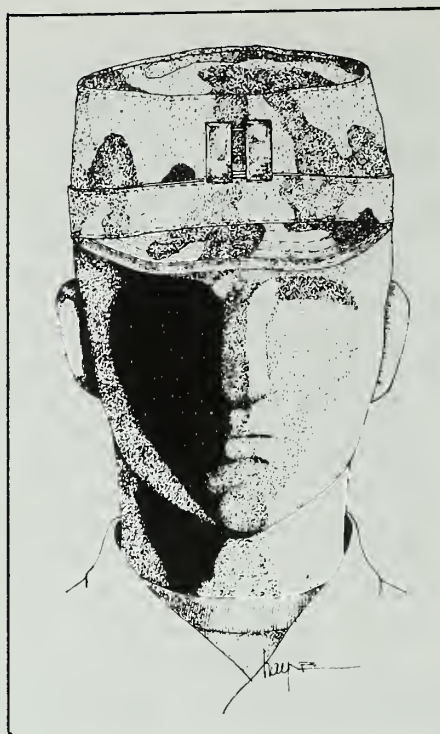
subordinate commanders will not be intimidated by meeting with you in your office and you won't be constrained by meeting in theirs. You want the meeting to be reasonably relaxed so you can concentrate on important matters in an atmosphere that will promote as free an exchange of thoughts as possible.

Of course, if you really want to cow a subordinate commander, you can have your desk raised on a platform and place his chair before you with its front legs suitably shortened. By this clever arrangement, he will not only be at a much lower level, he will also be pitched forward in a most uncomfortable manner. As you belabor him, you can watch him slide off onto the floor should he foolishly release his grip on the side of the chair to wipe his brow. Further, if you can arrange to have him walk down a long corridor to reach your desk while you sit and glare at his approach, so much the better.

Although no one resorts to such extreme devices, there is little doubt that intimidation practices do occur on one scale or another. Most of us probably can remember times when we wondered if our bosses were naturally beastly or just testing us for a reaction. But making allowances for those times when it really is necessary to put someone on the spot and generate some sweat, we need to be careful what sort of a stage we set for our initial meetings and discussions.

Once an appropriate place has been selected and the preliminaries gotten out of the way, it is important to get an "easy" conversation started. One workable technique is to get a subordinate to talk first about himself. After an appropriate interval, you should channel the discussion to his present job. These are the things you might want to explore:

- The specifics of his position, his responsibilities and decision-making authority, number of men supervised, and the like.
- What is going well, what is not, and why.
- The solutions he has tried and the results, including who else might have been contacted and why (if it's not obvious).
- Considering everything, what still needs to be done, why, and how.



- What part the battalion commander should play in these activities.
- How he interprets the unit's mission and fundamental purpose.
- What he considers his unit's special strengths and weaknesses.
- Who his best leaders are (NCOs first, then officers). The poorest. Remedies.
- Whether he is really proud to be in this outfit and why.
- What he considers to be a leader's proper role and what attributes a leader should possess.

His answers and expressed thoughts in any related discussions are vital, because they give you critical information about each of your key individual leaders. In fact, this is the foundation on which you need to build, and it can be used to improve the caliber of leadership throughout the battalion.

You will not learn all you need to know, of course, from this initial session, but you can learn a great deal if you are alert and reasonably careful in how you guide and control the exchange. You want to avoid creating an impression that it is actually a poorly disguised police-type interrogation of the prime suspect in a major crime.

As your subordinate responds to your questions, comment as appropriate, but don't interrupt him unless it is necessary to keep the conversation on track. Make

mental and written notes to be sure you don't miss anything important that you'll want to recall later, and begin formulating in your mind just how you are going to bring out the factors you want to stress. In most cases, you will probably need to expand on and reinforce something he said, recast a point he tried to make, or use his remarks to "correct" any misstatement or inference that might indicate his misunderstanding of an important concept or principle.

In any event, exactly how you should proceed following a subordinate commander's comments and responses will depend on the outline you hopefully formulated before this discussion and on the modifications you now make on the spot as a consequence of what he has said. That outline might include the following thoughts as to what a leader should be:

- Perceptively alert.
- Sensible and controlled as appropriate to the situation.
- Stable.
- Appropriately knowledgeable and experienced for the particular position.
- Technically proficient; responsibly daring.
- Physically and psychologically strong; self-reliant.
- Honest and reputable.
- Considerate but firm and fair; appropriately mature and consistent.
- Decisive; persistent; energetic.
- Astute; observant.
- Dependable and reliable, willing to accept responsibility for his decisions.
- Tolerant to risk (willing to assume the risks of the inevitable mistakes that occur when subordinates are given an opportunity to act and decide on their own).

In addition, he must be a problem solver, not a problem creator; a doer, not a philosopher; a great asker of pertinent questions, a truth seeker; and a developer of others (no unit is going anywhere unless its members have a capacity for individual growth).

These are tough criteria to meet. But why settle for something less? If you do, that's what you will surely get. Now that you have identified what you believe are leadership fundamentals, you can define the role of a leader in your battalion, and this is what you should tell each of your subordinate leaders:



- Leadership is a function of the personality and competence of the leader, his followers, and the situation in its ever-changing state.

- What this means is that as each situation is different from the others, a leader must be able to interpret the meaning and influence of each one and how his subordinates, conditioned by their prior experiences, will most probably react to it. These anticipated reactions provide the backdrop for the leader's assessment as to which leadership approach might be the most effective.

- While it is true that military units have their missions defined by higher authority, all missions are subject to interpretation at the various levels of leadership. Consequently, each unit commander has varying degrees of latitude in expressing and perhaps redefining this mission and achieving it. Teamwork can be created and sustained only if there is a commonly understood and accepted goal.

- Accordingly, a primary task of any leader is to define specific goals, after evaluating the ideas and convictions of his superiors and subordinates. Not only must he define them, he must also articulate them in terms that his soldiers will understand fully. Not everyone may agree with the primary and supporting goals, but those goals must be recognized before any unified effort can be initiated.

- These goals must be clearly related to the resources of a unit. In other words, they must be attainable within a reasonable period of time, either with a unit's present means or those subsequently acquired or developed. The primary unit resources are its soldiers and their equipment, its facilities, and its materiel.

- Concurrently, a leader should be appraising the skills and experience appropriate to the successful accomplishment of the unit's mission. This evaluation sets the stage for the comparison between what he believes is required to do each important job and what each present "of-

fice holder" possesses. Invariably, he will detect that there are some gaps between job requirements and the qualifications of the one in that position. His conclusions from such appraisals should form the basis for a plan of remedial action.

- Next in the order of matters needing his attention is a study of the unit's existing procedures, regardless of how they were developed, or simply imposed. He should ask for an explanation for them and take pains to observe them being performed. Throughout, he should be concerned with how they relate specifically to the unit's goals. Do they really work? Are they necessary, clear and simple, easy to follow, and easy to measure? If they cannot be really measured, their usefulness has to be suspect. Furthermore, if no one can adequately explain the reason why a particular procedure exists, then that procedure ought to be cancelled promptly.

## STANDARDS

Regulatory measures, of course, presume the existence of standards. These presumptions, however, do not always fulfill expectations. What this means is that a leader should make sure that the standards are indeed pertinent and valid—and that they are considered so by his soldiers. A word of caution here: Standards are difficult to define and difficult to keep current. As in bringing up a youngster, you have to watch them continually, and make adjustments.

- In sum, the vital element in all the above points is the personnel assigned to the unit now, and the fact that this is hardly a new conclusion does not lessen, or ease a commander's task. That task is to learn as rapidly as possible the relative strengths and shortcomings of each individual and the net effect of each on his job performance. Every leader must continually sharpen his skills at evaluating others, for he can make no more impor-

tant decision than the selection of others to meet certain demands. Those who do not or will not measure up to the rigors of leadership must be weeded out. Others of lesser ability and drive should be helped to recognize the limits of their competence and, thus, the levels to which they should aspire. Other equally important decisions concern subsequent assignments, how to prepare those affected for larger tasks, how to contribute to their growth, and how to encourage an extensive program of self-improvement. Those selected for advancement need to be exposed to both opportunities and threats, must be tested under adversity, and must develop a mental toughness concerning the inevitability of risk associated with decision making, and the fortitude to deal with and overcome the mistakes and failures that will be sure to come.

This ends your lengthy discussion, but the subject matter deserves no less time and effort. You conclude your remarks with the statement that these steps are exactly the ones you intend to follow for the battalion as a whole. Then, as you shake his hand and he prepares to leave, you say: "And I expect you to do the same at your level of authority and responsibility."

After he has gone, you should sit back for a moment and reflect that young leaders need someone to admire and emulate, someone who teaches important lessons and someone who provides support at critical junctures but who applies pressure, too, when that treatment is in order. Steel does not emerge from a bath of honey, but of fire.

Nor should a commander ever forget that everyone will be watching him.



George G. Eddy, a retired Army colonel, is on the faculty of the University of Texas at Austin. His active military service included tours in Korea and Vietnam and one as a battalion commander in the 4th Armored Division in Europe.



# ENLISTED CAREER NOTES



## VOLUNTEERS FOR OLD GUARD

The 3d Infantry (The Old Guard) is always looking for highly qualified soldiers to serve as members of the Army's official ceremonial unit. Stationed in the Washington, D.C., area at Fort Myer, Virginia, the Old Guard has a proud heritage that predates but parallels that of our constitution. The 3d Infantry, established in 1784, is the oldest active unit in the United States Army.

The Old Guard provides security for the nation's capital in times of civil disturbance or national emergency, and it is also responsible for conducting all military ceremonies in that area. In addition, since Old Guardsmen must also be prepared to perform regular infantry unit missions, they routinely take part in individual and unit tactical training.

The Old Guard has numerous specialty units. Among them are the Old Guard Fife and Drum Corps, the sentinels at the Tomb of the Unknown Soldier, the Caisson Platoon, the Continental Color Guard, the U.S. Army Drill Team, and the Commander-in-Chief's Guard. These elite units are well known and highly publicized throughout the United States and the Free World.

Anyone who wants to become a member of this prestigious unit must meet the standards outlined in AR 614-200, Table 8-4, and have a high school diploma or GED equivalent and a GT score of 100 or better. He must also have a record of performance and conduct that indicates a good potential for duty that may require exposure to the President of the United States, other heads of state, and local and foreign dignitaries.

Applications are currently being considered from active duty soldiers in the ranks of corporal/specialist-4 (on the sergeant promotion standing list) through staff sergeant in MOS 11B and in the rank of sergeant in MOS 11C.

Further information is available from

The Old Guard recruiting team at AUTOVON 226-3149/3150 or commercial (202) 696-3149/3150, or from the Commander, 3d U.S. Infantry (The Old Guard), ATTN: ANOG-REC, Fort Myer, VA 22211-5020.

## ANCOC POLICY CHANGES

Recent Department of the Army policy changes will require a drastic change in the methods used to schedule NCOs to attend the Infantry Advanced NCO Course (ANCOC) at Fort Benning. Two of these policy changes that have the greatest effect are:

- NCOs who complete the nonresident course after 1 October 1986 will be required to attend the ANCOC resident course.

- ANCOC graduation will become a prerequisite for promotion to master sergeant beginning 1 October 1987.

Priority for ANCOC scheduling and attendance is in the following order:

- Sergeants first class with dates of rank after 1 April 1981.

- Staff sergeants on the current promotion standing list for promotion to sergeant first class.

- Staff sergeants who have been selected for ANCOC but who are not on the current promotion standing list.

Sergeants first class who were selected for ANCOC as staff sergeants and later promoted with dates of rank earlier than 1 April 1981 may submit requests for constructive credit for ANCOC through personnel channels to Commander, MILPERCEN, ATTN: DAPC-EPT-FN, 2461 Eisenhower Avenue, Alexandria, VA 22331-0400.

Sergeants first class with dates of rank of 1 April 1981 or earlier who were not selected for ANCOC attendance will be "grandfathered" so that they can compete for promotion to master sergeant.

Sergeants first class who are not sure

whether they were selected for ANCOC attendance before their promotion should go to their personnel sections and check the appropriate ANCOC selection rosters to determine their status, because this could have an effect on their futures.

The MILPERCEN point of contact is Ms. Blackwell, AUTOVON 221-8424 or commercial (703) 325-8424.

## NEW TELEPHONE SYSTEM

A more cost-effective telephone system was recently installed in the Infantry/Armor Branch at MILPERCEN. The new system has doubled the capability to receive incoming calls at a fraction of the cost of the previous system.

Telephone prefixes remain the same: AUTOVON 221, commercial area code 202, and local prefix 325.

An updated telephone directory for Infantry Branch is provided in these notes.

## PROMOTION TO SERGEANT

Effective 1 March 1987, a soldier must have a high school diploma or GED equivalent before he can be promoted to sergeant. Soldiers on a "recommended" list who do not meet this requirement by that date will be removed from the list.

This requirement is outlined in AR 600-200, Chapter 7, paragraph 7-15.

## EDUCATION INCENTIVES CENTER

The Department of the Army activated an Education Incentives Center at MILPERCEN late last year. It provides the day-to-day management of the education incentives the Army offers its soldiers. It is the central point for keeping the commitments on educational assis-



tance that were made to soldiers when they enlisted.

The center is also responsible for answering questions from soldiers in the field, establishing a tracking system, and providing input for budget submissions.

The center handles the following programs:

- Veterans' Education Assistance Program (VEAP).
- Fiscal Year 1981 Department of Defense Educational Assistance Test.
- Fiscal Year 1981 Mini GI Bill.
- Army College Fund (also known as Super VEAP, Ultra VEAP or "kickers").
- New GI Bill.
- New Army College Fund.
- Loan Repayment Program.

The pamphlet *Commander's Guide to the New GI Bill and the New Army College Fund* provides information that is useful to commanders and education centers in counseling soldiers on their benefits.

The pamphlet was sent to field grade and higher level commanders, and limited supplies are also available for new commanders. Copies can be requested from HQDA, ATTN: DAPE-MPA-P, Washington, DC 20310. Further information on the program is available from HQDA, ATTN: DAPC-PLP; AUTOVON 221-0285/9627, commercial (703) 325-0285/9627.

## FAST TRACK PROGRAM

The Army has approved a new program called Realignment of Overages Through Reclassification and Enlistment—The Fast Track Program. The program has two major objectives: to get soldiers into Military Occupational Specialties (MOSs) that will provide them with career development and also meet readiness needs.

The ranks with the largest number of imbalanced MOSs are sergeant and staff sergeant, and the main cause is structural changes—new positions are created, for example, and other positions are changed, drastically reduced, civilianized, or eliminated.

When the Army conducted a major voluntary reclassification in 1984, 3,500

INFANTRY BRANCH DIRECTORY		
Team Breakdown (pay grade, MOS)	Team Members	Team Numbers (202)325, AUTOVON 221
E1-E4 (11B, 11M) E1-E5 (11C, 11M)	Mrs. Broeder Mr. Poindexter Mrs. Rawlings	9543
E5-E6 (11B, 11M)	SFC Smith Mrs. Christenson Mr. Ferguson Ms. Filakousky Mrs. Heath Mr. Sewell	9399
E6-E7 (11C, 11H) E7 (11B, 11M) E8	SFC Draughn SFC Baker SFC Hancock Mrs. Garner Ms. Burroughs Mrs. Stinson Mrs. Wagner	8056
ANCOC Scheduling	Mrs. Shaw SFC Calanni	9166
<b>Additional Sections</b>		
Special Forces/Ranger		8340
Armor Branch		9080
Drill Sergeants		8070

soldiers were approved for reclassification to a shortage skill. But there are still not enough volunteers to correct the imbalances.

Some future changes will give more soldiers an opportunity to reclassify into shortage skills. For example, first-term soldiers are not now allowed to reclassify. But this will change to allow soldiers in overstrength MOSs to reenlist to a shortage skill, regardless of their expiration term of service (ETS). Also, now, if soldiers were trained in an MOS on their current term of enlistment, regulations prevent reclassifying them. This will also change to allow these soldiers to reclassify to shortage skills.

Fast Track will give soldiers, primarily in the ranks of corporal/specialist-4 and sergeant who are serving in overstrength MOSs, an opportunity, through reclassification and reenlistment, to select a shortage skill.

A test of this new program began 1 May and will continue through August. All eligible soldiers should have received letters explaining the program. The letters inform soldiers who are eligible for reenlistment that they may select the retraining option only. Others will be given

90 days to select a shortage skill of their own choosing, if they are otherwise qualified.

Soldiers who have not received a letter can still apply, if they are otherwise qualified. If enough soldiers do not volunteer for shortage skills, the Army may direct reclassification to meet readiness. Soldiers who participate in the Fast Track Program will receive formal training in the new MOS.

Commanders and MILPOs will play an important part in helping soldiers make decisions. The soldiers need to understand that in overstrength MOSs, their chances for promotion are reduced, and other opportunities for MOS-related training and assignments are limited.

Additional information is available from the Retention Management Branch, Enlisted Personnel Management Directorate, MILPERCEN, AUTOVON 221-9695 or commercial (703) 325-9695.



# OFFICERS CAREER NOTES



## DISCRIMINATORS

Officers often call Infantry Branch to ask why they have not been selected for promotion. Assignment officers do not sit on selection boards, however, nor do selection boards provide reasons as to why an officer has not been selected. Assignment officers can only review a file and try to tell the officer why they *think* he was not selected. Since promotion is highly competitive, it is sometimes difficult to determine exactly why. In other cases, it is readily apparent.

The results of past boards have established clear patterns that officers are not normally selected for promotion if they have any of the following items in their official military personnel files: Article 15s, letters of reprimand, record of driving while intoxicated, relief for cause OERs, and failure to meet weight standards.

When none of these exist, normally the officer has established a pattern, as shown on his OERs, of not maintaining his performance on a par with that of his peers. Board members must make some tough decisions, and one OER can sometimes make a difference.

This is not to say that an officer cannot recover from an OER that is below average or from a mistake he has made. He can, and board results prove it. The important thing is for him not to establish a pattern of performance below that of his peers and to do his best, no matter what position he holds at any given time.

All positions are important, but there are some that are critical to an officer's Infantry development and in which he must do well to remain competitive in the Infantry: Company commander, battalion S-3, battalion XO, and brigade S-3. When an officer serves in these positions he cannot afford to fail.

Again, this advice is based upon the results of past boards and it is not likely that these trends will change in the future.

Any officer who has questions concerning his performance or potential for promotion should contact his assignment officer at Infantry Branch for the best possible evaluation on the basis of his files.

## VOLUNTEER FOR RANGERS

The Military Personnel Center is seeking lieutenants to volunteer for service with the 75th Infantry (Ranger) Regiment, 1st Special Operations Command (Airborne).

Volunteers are being sought from the following career fields: Infantry (SC 11), Field Artillery (SC 13), Signal Corps (SC 25), Military Intelligence (SC 35), and Chemical Corps (SC 74).

Lieutenants who are accepted into the Ranger regiment can expect to be assigned to Fort Lewis, Washington; Hunter Army Airfield, Georgia; or Fort Benning, Georgia. First, however, they will be sent to the three-week Ranger Indoctrination Program (RIP) at Fort Benning.

To be eligible for a Ranger assignment, an officer must:

- Be Airborne qualified.
- Be Ranger qualified.
- Have at least 12 months of basic branch experience commensurate with his rank.
- Have successfully completed the RIP.
- Be able to serve at least 12 months in a basic branch duty position as a lieutenant.

Although breaks in tours will be approved for CONUS-based officers who are selected for a Ranger regiment assignment, the Army will not curtail assignments for officers who are serving overseas tours. In addition, personnel who are not Ranger qualified may be considered for assignment on a case-by-case basis if they volunteer to attend and then successfully complete Ranger

School and still meet the other prerequisites.

Lieutenants who are interested in volunteering for Ranger duty should contact their battalion adjutants and submit requests for reassignment as stipulated in AR 614-100 through their chains of command.

## MILPERCEN Q AND A

The Army's Military Personnel Center is asked hundreds of questions daily by officers around the world. They want to know the facts about promotions, schooling, assignments, and professional development.

Here are some of the more commonly asked questions and some answers to them:

**Q. What effect has the slow-down in promotions had on monthly promotions?**

A. The total number promoted each month, in the Army Competitive Category, has slowed since early 1986. Briefly, 58 officers were promoted to colonel in December 1985 while 9 were promoted in May 1986; 136 to lieutenant colonel in December, 62 in May; 758 to captain in December, 270 in May.

**Q. What are the projections for the future?**

A. It is difficult to pinpoint exact numbers. Promotion numbers are a function of budget dollars, separations, retirements, and the needs of the Army. Through the remainder of Fiscal Year 1986, however, the following totals of active federal commissioned service (AFCS), for the Army Competitive Category, may be used as a *guide* for "pinpointing points" for promotion:

- Colonels—22 years, 6 months.
- Lieutenant Colonels—17 years, 7 months.
- Majors—10 years, 8 months.
- Captains—4 years.



Average pin-on time fluctuates every month.

**Q. Doesn't the Defense Officer Personnel Management Act (DOPMA) mandate "pin-on" points for promotion?**

A. No. DOPMA sets *guidelines*, which are goals, not requirements, under the law. The current targets are:

- Colonels—22 years, plus or minus 1 month.
- Lieutenant colonels—16 years, plus or minus 1 month.
- Majors—10 years, plus or minus 1 month.

**Q. Doesn't DOPMA require a promotion board, per grade and competitive category, once a year?**

A. No. The law requires promotion boards to be held as the Secretary of the Army determines necessary for the service. For example, selection for promotion to captain, Army, may be held twice a year (July and December 1986) and for promotion to lieutenant colonel, Army, may be held less than once a year (July 1985 and February 1987).

**Q. The last captain, Army promotion board required first lieutenants to serve one year on active duty as commissioned officers to be eligible. Will this requirement continue?**

A. Yes. Selection for promotion to captain is now on a "best qualified" instead of a "fully qualified" basis. Furthermore, the board is held in conjunction with the conditional voluntary indefinite (CVI) board. One year's active-duty service, if the officer is accessed as a first lieutenant, is the minimum required to establish performance trends. This policy is to protect the recently accessed officer and to make sure he is competitive with others in the promotion zone.

**Q. What are Selective Early Retirement Boards (SERBs), and what are the eligibility requirements?**

A. SERBs are authorized under Section 63B of 10 United States Code. The Secretary of the Army may retire Regular Army colonels with four years time in grade as colonels, if they are not on a promotion list. Regular Army lieutenant colonels may be retired if they are twice not selected for promotion to colonel. Only 30 percent of the eligible population may be selected, and those who are not selected may not be considered again for five years. (The proponent for SERB is the Officer Personnel Management Directorate.)

**Q. How can I apply for advanced civil schooling?**

A. Officers apply for advanced civil schooling on DA Form 1618-R, as explained in AR 621-1. Officers should apply about one year before their desired starting date and make sure they register for the appropriate standardized test (GRE or GMAT) in time to meet university application deadlines.

**Q. In which graduate disciplines is the Army educating its officers?**

A. The Army has requirements for graduate education in the humanities, business/management, engineering, physical sciences, social sciences, and law. Most fully funded social science education is in various area studies curricula in support of the Foreign Area Officer Program, and most humanities study, other than that supporting the U.S. Military Academy Instructor Program, is in journalism. Additional information is available from professional development officers at MILPERCEN.

**Q. If I single-track in my branch, does this mean I won't be eligible for assignments to USMA, the Recruiting Command, or ROTC duty?**

A. No, it does not. These positions are considered branch immaterial, and all branches have requirements to support these organizations.

**Q. I'm interested in applying for**

**Functional Area 48, Foreign Area Officer. How and when do I apply, and what can I do to increase my chances for selection to the program?**

A. The Foreign Area Officer (FAO) Program has initiated a process to designate qualified officers during their fifth year of service. This is a year earlier than the normal functional area designation process for a given group. Applications for Year Group 1981 officers will be accepted during the fall of 1986. Applications may be obtained from MILPERCEN, ATTN: DAPC-OPA-C. The underlying dimension of the FAO functional area is the combination of regional expertise, political-military awareness, and a solid foundation in professional military skills. In addition, the Graduate Record Examination (GRE) and the Defense Language Aptitude Battery (DLAB) tests need to be taken.

**Q. Who is eligible for Project 4 Product Manager (PM) selection?**

A. Colonels and lieutenant colonels in the Materiel Acquisition Management (MAM) Program, assigned skill "6T" are automatically reviewed by the PM selection boards.

**Q. How does an officer enter the MAM Program?**

A. An interested officer should send a letter of application to the career management branch. A MILPERCEN board convenes three or four times annually to select MAM Program participants from among the applicants.

**Q. Should officers submit functional area designation preference statements?**

A. Yes. Although Army requirements are the most significant factor in the functional area designation process, many other factors influence individual designation. Other considerations include personal preference, education, experience, performance, and proponent input to formulation of designation objectives.





# BOOK REVIEWS



World War II unit histories are being published in increasing numbers today, although they now have a look somewhat different from those published in the years immediately following the war. Today's unit histories are far more personal, as may be seen in the following:

• **ORCHIDS IN THE MUD: PERSONAL ACCOUNTS BY VETERANS OF THE 132d INFANTRY REGIMENT**, edited by Robert C. Muehrcke (J.S. Printing, 1985. 464 Pages. \$22.50). This book is truly a labor of love on the part of the editor, who is now a medical doctor in Oak Park, Illinois. He has devoted countless hours during the past years to collecting and processing the purely historical accounts; the purely personal accounts; the maps, charts, and photographs; and all of the other material that appears in this, his final product. The members of the regiment should be both pleased with and proud of Dr. Muehrcke's efforts.

Part of the Americal Division, the 132d Infantry fought at Guadalcanal in 1942 and 1943; on Bougainville in 1944; and in Leyte, Burias, Trias, and Cebu in 1945. On 8 September 1945 it moved to Yokohama, Japan, as part of the Allied occupation forces.

Dr. Muehrcke served as an enlisted man in the 132d Infantry until the end of the Bougainville campaign when he was sent back to the States and Fort Benning to officer candidate school. After he received his commission, he returned to the Pacific, joined the 383d Infantry Regiment, and fought in the bloody battles on Okinawa in 1945.

He uses the then-and-now approach, which is so popular with those who write unit histories today, showing the soldiers of the regiment as they were during the war years and as they are now 40 years later.

• **THE MEN OF COMPANY K: THE AUTOBIOGRAPHY OF A WORLD WAR II RIFLE COMPANY**, by John D.

Campbell and H.P. Linebaugh (William Morrow, 1985. \$18.95). Like Dr. Muehrcke, the authors of this book draw on the memories of their company's survivors to tell the story of their unit—Company K, 333d Infantry, 84th Infantry Division—during its more than 100 days of combat in Europe from early November 1944 to early May 1945. The company fought in the Siegfried Line, in the Battle of the Bulge, and from the Roer River to the Elbe River.

Linebaugh commanded the company during most of its combat days, while John Campbell, the company's first replacement officer, fought with the company until he was badly wounded on the last day of the Battle of the Bulge. Like the previously mentioned book, the authors present their living compatriots as they were during the war and as they are today. Unlike Dr. Muehrcke, however, they concentrate on the actions of a single infantry company, which gives their book a special aura. Together, the books point out graphically the difference between infantry combat in the Pacific and in Europe.

• **HEDGEROW HELL: NORMANDY, 1944**, by John S. Allsup (Personal printing, 1985. 160 pages). This history, too, is a very personal one, although it contains more graphics than either of the previous two. It is the story of a single infantry platoon—the 1st Platoon, Company A, 1st Battalion, 175th Infantry Regiment, 29th Infantry Division—as it fought its way from Normandy Beach through the *bocage* country of Normandy toward St. Lo in June 1944. Allsup was its platoon leader until he was wounded and evacuated on 18 June; the platoon's story ends at this point.

The photographs are particularly good, and Allsup carries the 29th Division's story (through the captions on the photographs) up to its capture of St. Lo on 20 July. An interesting feature is the fact that the story is told in both English and French (the book was originally published in France). An errata sheet corrects the numerous typographical errors.

A personal history of quite another kind is **MONTY AT CLOSE QUARTERS: RECOLLECTIONS OF THE MAN**, edited by T.W. Howarth (Hippocrene Books, 1986. 180 Pages. \$17.50). The author has pulled together 11 separate essays and one memorial address apparently to counter a number of recent critical accounts about Field Marshal Sir Bernard Montgomery, a noted British World War II commander in Africa, Sicily, Italy, and northwest Europe. The finished product is but another song of praise for a British commander who is steadily being elevated by British writers to military sainthood. Where there is muted criticism, it is more than overcome by fulsome praise. At the end, the reader knows precious little more about Montgomery the soldier than he did at the beginning.

Although the flood of books about the Vietnam War has slowed, we have two recently published ones that should prove immensely interesting and helpful in recalling the events of that war: **VIETNAM WAR ALMANAC**, by Harry G. Summers, Jr. (Facts on File, 1985. 414 Pages. \$24.95) and **THE VIETNAM WAR: AN ALMANAC**, by World Almanac Publications. General Editor: John S. Bowman (World Almanac Publications, 1985. 512 Pages. \$24.95).

Summers, a retired U.S. Army colonel and a frequently published author, not only served as an infantry officer in Vietnam, he has written one other book on that war—*On Strategy*—that attracted a goodly amount of critical acclaim several years ago.

**NOTE TO READERS: All of the books mentioned in this review section may be purchased directly from the publisher or from your nearest book dealer. We do not sell books. We will furnish a publisher's address on request.**



In his book, he pulls together 21 maps and more than 120 photographs to supplement his text—the major part of which is devoted to 450 separate entries on people, battles, weapons, units, and the like—and produces an outstanding reference work. An interesting feature is a suggested list for further reading found at the end of most of the entries.

Another interesting feature is the author's willingness to give his own views on the people and events he mentions in those separate entries that make up the bulk of the book.

Bowman's *World Almanac* book is also a fine reference work. Although it is similar in some ways to Summers' book, it uses a more detailed chronology and a series of separate essays on the land, air, naval, and irregular force operations to present its information. There is also a separate section that contains short biographies of the key personnel on both sides. The book has no maps, but does have one section of color photographs and more than 100 black-and-white photographs.

For some reason, the German Army of World War II is of greater interest to many U.S. infantrymen today than the U.S. Army of that war. In fact, it is difficult to find many infantry leaders today who know very much about the U.S. Army of the World War II era and its exploits. That being the case, here are three books those infantrymen should enjoy:

- **FORGOTTEN LEGIONS: GERMAN ARMY INFANTRY POLICY, 1918-1941.** By S.J. Lewis (Praeger, 1985. 189 Pages. \$29.95). The title of this book is somewhat misleading, for the author's primary concern is more with the disintegration of the German Army General Staff after Adolf Hitler came to power than with German Army infantry policy between the wars.

On the other hand, Lewis, who is with the Combat Studies Institute at Fort Leavenworth, does make certain needed corrections about the German Army of World War II—its organization, leaders, and methods of operation. He feels that many people in the United States have "been unduly influenced by the memoirs of former German generals," particularly Heinz Guderian's, to the extent that they have almost totally ignored 80 per-

cent of that Army's field units.

In the book's introduction, Charles Burdick, who is also a student of the World War II German military establishment, suggests that because "the books on the Second World War published over the last two decades show an amazing similarity to each other. . . . The result is a frightening distortion of German military history in particular." To him, this book "heralds the long-needed change in our approach to the subject of German military history."

We think you will agree with that statement, but at the same time we would welcome a good history, in English, of the German infantry of World II.

- **THE ONSLAUGHT: THE GERMAN DRIVE TO STALINGRAD.** Edited by Justus Goepel (Norton, 1985. 192 Pages. \$24.95). This book was originally published in West Germany in 1984. It contains 152 color photographs (selected from several thousand) taken by three German soldiers. Never before published, the photographs track the German Army from June 1941 when it crossed the Russian border to October 1942, when it bogged down in Stalingrad. There are few "action" photographs as such in the collection. Rather, the ones that are used were chosen to show the everyday reality of life as the German soldier experienced it on the Eastern Front. An essay by Herbert Kraft and the editor's postscript tell something about the soldiers who took these photographs, the organization of the book, and color photography in World War II.

- **MOSCOW, 1941.** By Janusz Piekalkiewicz (Presidio, 1985. 287 Pages. \$20.00). This book was also originally published in West Germany, but in 1981. The author is a native of Poland who has written extensively on World War II military history. In this book, he reconstructs—from actual news reports, military dispatches, and radio accounts—the 1941 German military campaign in Russia. These are supplemented by the author's own analyses of the events, including short accounts of Napoleon's similar disastrous campaign for comparison. Maps and photographs nicely complement the narratives. There are also brief biographies of the "men in command," a copy of the German Army

General Staff's May 1941 report containing military geopolitical data on European Russia, some weapons and organizational data, and a summary of losses suffered by both sides—human and materiel.

We have also received an interesting publication from *Rivista Militare*, a leading Italian military magazine. It is a collection of late 19th century watercolors by Quinto Cenni, an Italian painter who is known in Italy as "the most important historiographic painter of soldiers." This particular collection, titled "IL SOLDATO ITALIANO DELL'OTTOCENTO, VOLUME QUARTO," has 17 full-color reproductions of Cenni's paintings plus an equal number of smaller black-and-white photographs accompanied by descriptive data.

And from the Combat Studies Institute of the Army's Command and Staff College we have received two of its most recent publications, the titles of which are largely self-explanatory: **SEEK, STRIKE, AND DESTROY: U.S. ARMY TANK DESTROYER DOCTRINE IN WORLD WAR II.** By Christopher R. Gabel. Leavenworth Papers Number 12, September 1985. 92 Pages; and **THE OPERATIONAL LEVEL OF WAR,** CSI Historical Bibliography Number 3, December 1985. Compiled by Elizabeth R. Snoke and annotated by the CSI Research and Teaching Committees. Both of these publications are extremely useful to all infantrymen. In particular, Gabel's study does much to clear away the confusion that has surrounded our use of tank destroyers during World War II. Few infantrymen knew what to do with them at the time. The armor community did not want them then, and probably would not like to see the concept resuscitated. The tank destroyer units that did get into action were generally misused and misunderstood; that they accomplished anything at all—and they did accomplish some notable things—was a tribute to the men who fought in them, and not to the establishment.

Finally, we have received from the Monch Publishing Group its massive, three-volume **DEFENCE EQUIPMENT CATALOGUE, 1985/86.** It is divided into two main parts: the companies and



organizations in 25 countries that sell military equipment to other countries and information on the procurement organizations in those countries (Volume I), and information on the actual devices, equipment, and services offered for sale (Volumes II and III). The latter part has been arranged according to the U.S. Federal Supply Classification (FSC), which is used by many countries and has become a standardized supply system within NATO and most of the free world. Prices are not included. (No information from any of the Warsaw Pact countries or their allies is shown.) Most of the entries in Volumes II and III are presented in full color together with a significant amount of technical data for each. For the infantryman, these volumes are excellent reference sources.

Here are a number of other books we want you to know about:

**THE UNION CAVALRY IN THE CIVIL WAR, VOLUME III: THE WAR IN THE WEST, 1861-1865.** By Stephen Z. Starr (Louisiana State University Press, 1985. 616 Pages. \$32.50). Reviewed by Major Don Rightmyer, United States Air Force.

The first volume in Stephen Starr's three-volume work on the Union cavalry in the Civil War, published in 1979, was met with praise by the noted Civil War historian, Bell I. Wiley, for the author's freshness and excellent style. That volume covered the cavalry operations in the eastern theater through the battle of Gettysburg. The second volume, released in 1981, continued the story of the cavalry experience in the east through the remainder of the war. Finally, with this book, Starr's trilogy is complete, although, unfortunately, he passed away in early 1985 just as he completed work on the book.

In this volume, Starr crosses the Allegheny Mountains to look at what went on with the mounted forces in the western theater of operations from early 1861 to the end of the war four years later. When the cavalry units were first organized in the west, they were apparently ill-equipped in comparison with the cavalry units serving with the Army of the Potomac. And if the "spit and polish" of the eastern troopers left something to be desired, the western

cavalrymen were even more lax in their organization and military discipline. That comparison is not too surprising in light of similar descriptions of the infantry forces in each theater.

Much of the early cavalry maneuvering took place in the border area of Kentucky where the initial posturing centered on that state's alleged neutrality. As time and events moved on, cavalry actions spread throughout the western theater in coordination with the Army's campaigns. In addition, Federal cavalry commanders frequently found themselves pursuing such Confederate raiders as John Hunt Morgan and Nathan Bedford Forrest. Starr particularly emphasizes the role played by the cavalry units in the battles at Vicksburg, Chickamauga, and Nashville. The book ends where the author began his first volume—at Selma, Alabama, where the progress and evolution of Union cavalry capabilities during the war were amply demonstrated.

This series was recognized in 1985 for its outstanding contribution to history, and it will certainly stand as the authoritative work on the subject for years to come. The books are thorough and yet readable, a quality not often found in all military history books. For those who are interested, all three volumes are still in print.

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**"THE BEST SCHOOL IN THE WORLD": WEST POINT, THE PRE-CIVIL WAR YEARS, 1833-1866.** By James L. Morrison, Jr. (Kent State University Press, 1986. 267 Pages. \$27.50). Reviewed by Colonel James M. McGarity, United States Army Retired.

The author is a graduate of the Virginia Military Institute and a former faculty member of West Point. In this book he has produced a detailed description of the early development of West Point as a military and academic institution. He focuses on the period from 1833 to 1866, which some writers have labeled the Military Academy's "Golden Age," because it was during this time that the influence of the Corps of Engineers on the institution was most pronounced. The title of the book is taken from a letter President Andrew Jackson wrote to his

nephew, a West Point graduate, in which Jackson stated that the Military Academy was "the best School in the world."

The author presents a general background of the U.S. Army as it was in the early 1800s and an account of the early development of the Academy. It was during the summer of 1833 that the Superintendent, Colonel Sylvanus Thayer—known later as the "Father of the Military Academy"—resigned following a dispute with Jackson over the restoration of a delinquent cadet. Thayer was convinced he had established a perfect academic system and worked to see it retained even after he had left the Academy. In fact, his struggles, and the struggles of others to retain the system, constitute the central theme of the book.

Of special interest is the author's discussion of West Point and the Civil War. Morrison believes the Academy was more nationalistic than pro-Southern in its orientation and that, overall, it strengthened rather than weakened loyalty to the country. The many graduates who rose to high positions in the Federal armies gave the Academy an additional reason for its existence.

Morrison concludes that in 1866 the Academy took on an attitude that exempted it from further educational progress. Even with the removal of the direct influence of the Corps of Engineers, the "new" postwar West Point continued with the curriculum, customs, and parochial biases of previous days.

The book is valuable to the serious student of the early days of West Point and the U.S. Army, and to the history buff of the Civil War period. Morrison's research was most detailed and seemingly complete, as shown by the fact that his text of 154 pages is supported by detailed footnotes, 12 appendixes, illustrations, and a lengthy bibliography.

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**OPERATION TORCH: THE ALLIED GAMBLE TO INVADE NORTH AFRICA.** By William B. Breuer (St. Martin's Press, 1986. 272 Pages. \$18.95). Reviewed by Major General Albert H. Smith, Jr., United States Army Retired.

This historical treasure is as exciting to read as it is informative, and while



this, our first major operation against Germany and her allies, has been described before, it has never been told in such a comprehensive, easily read style.

As a participant in Operation TORCH, I found the book almost impossible to put aside. The author weaves the complex events that surrounded the operation into a simplified, chronological, fiction-like narrative. Our present Joint Chiefs of Staff and all of the members of our armed forces can find some situations in this book that parallel those they now face throughout the world.

More important, though, this book is for soldiers, sailors, and airmen. The 509th Parachute Infantry Battalion conducted our first airborne combat mission. "El Darbo," Bill Darby, led a newly formed U.S. Ranger battalion in a successful assault on the guns at Arzew. Major General Terry Allen and other veterans of the fighting during World War I somehow got their troops ashore after weeks at sea to capture Oran, Casablanca, and Algiers. Individual Allied fighting men did their jobs or died trying. After the first 72 hours, U.S. and British forces were victorious and French soldiers were once again our allies.

Infantrymen are encouraged to read this book and look for the lessons that were learned the hard way in November 1942 but that may still be valuable today. This is one of the best short references

on our first European campaign of World War II.

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**THE 25-YEAR WAR: AMERICA'S MILITARY ROLE IN VIETNAM.** By General Bruce Palmer, Jr. (University of Kentucky Press, 1984. 236 Pages). Reviewed by Doctor Joe P. Dunn, Converse College.

Although the various military services are well into major multi-volume histories of the Vietnam War, we have needed a good one-volume military assessment of the war to augment Dave Richard Palmer's earlier *Summons of the Trumpet* (1978). General Bruce Palmer's book is that and more. Besides providing a sound narrative history of the conflict, Palmer deals with the command structure, strategy, tactics, and larger lessons of the war. His judgments on U.S. strategy and the context of the experience are wise and fair. Although many of his key points are not new, nowhere are they better stated and explained. The book far surpasses Harry Summers' *On Strategy* (1981), which has attracted so much attention.

Few have better credentials for such an undertaking. General Palmer served in the highest levels of staff and command during the long war. We benefit from his insight and personal experiences as assistant to the Army's Deputy Chief of Staff

for Operations (1963-1965) where he regularly attended JCS deliberations; commander of II Field Force and later deputy to General Westmoreland (1967-1968); and Vice Chief of Staff and Acting Chief of Staff (1968-1973).

The list of General Palmer's assessments and lessons is too vast to address. It must be sufficient to note that the author gives the military services high marks on their operational performance and innovation, but raises serious questions about larger strategy issues and the domestic political influences that dominated decision making.

This book should be read by anyone with serious interest in the U.S. military involvement in Vietnam and in the military services' role in future conflicts.

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**HAWAII UNDER THE RISING SUN.** By John Stephan (University of Hawaii Press, 1984. 228 Pages. \$16.95). Reviewed by Colonel Robert G. Clarke, United States Army Retired.

Much has been written about Japan's World War II aims in the Pacific in general and about her attack on Pearl Harbor specifically. But little has been written about Japan's plans for Hawaii and how those islands fitted into Japan's overall strategy.

The author, who teaches at the Univer-

# Infantry



sity of Hawaii, here presents a well researched and well written volume on that interesting subject. He concentrates on both the military and the political plans Japan had for the Hawaiian Islands and includes a discussion of the social and political positions of Hawaii's Japanese community. One interesting chapter gives Japan's views on how Hawaii's cultural and political orientation might be changed after the islands had been secured and how they might be incorporated into the Greater East Asia Co-Prosperity Sphere.

The political side of the Japanese government was never able to articulate clearly what it had planned for Hawaii, nor did it have a clear idea of how the islands would be incorporated into the empire. On the other hand, from the very beginning Japan's military leaders clearly saw the military importance of the islands.

Regardless, after the battle of Midway in June 1942, the Japanese never again had the military strength to secure the islands, and Hawaii quickly faded from view as a valid military objective. Nevertheless, the Japanese political bureaucracy continued to write and talk about a take-over of the islands as late as 1944 when all practical hope had long passed.

This is an interesting study in what might have happened in Hawaii, but it is even more interesting when one consid-

ers our present close and cooperative relationship with Japan and its current government.

# RECENT AND RECOMMENDED

**OVER THE HUMP.** By Lieutenant General William H. Tunner. USAF Warrior Series. New Imprint of the 1964 Edition. USGPO, 1985. S/N 008-070-00557-3. 368 Pages. \$8.00, Softbound.

**THE KNIGHTS OF CHRIST.** Text by David Nicolle. Color Plates by Angus McBride. Osprey, 1984. Men-at-Arms Series 154. 40 Pages. \$7.95.

**LINCOLN FINDS A GENERAL: A MILITARY STUDY OF THE CIVIL WAR, VOLUME ONE.** By Kenneth P. Williams. A Reprint of the 1949 Edition. Indiana University Press, 1985. 443 Pages. \$10.95, Softbound.

**OPERATIONAL ART AND TACTICS — A SOVIET VIEW.** By V. Ye. Savkin. Translated and published under the auspices of the U.S. Air Force. Reprint of the 1972 Edition. USGPO, 1985. 296 Pages. S/N 008-070-00342-2. \$7.00, Softbound.

**PROBLEMS OF CONTEMPORARY WAR — A SOVIET VIEW.** Translated and published under the auspices of the U.S. Air Force. Reprint of the 1977 edition. USGPO, 1985. 304 Pages. S/N 008-070-00343-1. \$7.00, Softbound.

**LEADERSHIP IN ORGANIZATION,** by the United States Military Academy. USGPO, 1985. 682 Pages. S/N 008-027-00003-0. \$28.00.

**LATIN AMERICAN INSURGENCIES.** By Georges Fauriol. National Defense Uni-

versity. USGPO, 1985. 148 Pages. S/N 008-020-01030-8. \$3.25, Softbound.

**SOVIET STRATEGIC DEFENSE PROGRAMS,** by the Department of Defense and Department of State. USGPO, 1985. 30 Pages. S/N 008-000-00433-1. \$1.75, Softbound.

**DEFENSE ORGANIZATION: THE NEED FOR CHANGE,** by the Committee on Armed Forces, United States Senate. USGPO, 1985. 656 Pages. S/N 052-070-06067-1. \$14.00, Softbound.

**ANNUAL REPORT TO CONGRESS,** by the Department of Defense. USGPO, 1986. 340 Pages. S/N 008-000-00446-3. \$14.00, Softbound.

**DOCUMENTS ON GERMANY, 1944-1985,** by the Department of State. USGPO, 1986. 1,468 Pages. S/N 044-000-02062-9. \$24.00, Softbound.

**INTO THE ASSAULT: FAMOUS DIVE BOMBER ACES OF THE SECOND WORLD WAR.** By Peter C. Smith. University of Washington Press, 1986. 236 Pages. \$20.00.

**A SHORT HISTORY OF AIR POWER.** By James L. Stokesbury. William Morrow, 1986. 313 Pages. \$18.95.

**THE UNITED STATES NAVY IN WORLD WAR II.** Selected and Edited by S.E. Smith. William Morrow, 1986. 1,049 Pages. \$15.95, Softbound.

**THE MIRACLE OF DUNKIRK.** By Walter Lord. The Viking Press, 1982. 323 Pages. \$17.95.

**ALLIES: PEARL HARBOR TO D-DAY.** By John S.D. Eisenhower. Doubleday, 1983. 500 Pages. \$24.95.

**FOLLOW ME AND DIE.** by Cecil B. Curry. Stein and Day, 1984. 320 Pages. \$18.95.

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# **From The Editor**

## **SUBSCRIPTIONS**

Once again we would like to thank all of our subscribers for their support during the first six months of this calendar year. As of the end of April 1986, we had 4,780 paid subscribers on our rolls, more than 500 of whom resided in countries other than the United States. We are a little behind our 1985 pace, though, and we ask those Infantrymen who have not yet taken out a subscription to do so now. By joining us in our endeavors, you not only become a member of the Infantry Association, you also signify your professionalism and your desire to "stand tall" for the entire U.S. Infantry community.

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The Infantry School maintains a hot line for military callers for around-the-clock contact with the field. If you have a general question, or a question dealing specifically with the Army Training and Evaluation Program (ARTEP), or if you have something of an immediate nature to pass on, the number to call is AUTOVON 835-7693, commercial (404) 545-7693.

If you have a lengthy question or comment, please send it in writing to Commandant, USAIS, ATTN: ATSH-SE, Fort Benning, GA 31905-5452.

## **ADDRESSES**

All of the books mentioned in our book review department may be purchased directly from the publisher or from your nearest book dealer. We will furnish a publisher's address on request. We also maintain a list of reputable used book dealers that we will send to anyone interested in used or out-of-print books.

## **COMING UP IN INFANTRY**

"Illuminated Night Attack," by Captains Frank H. Rice and Robert G. Fix.

"More on Infantry," by Colonel Huba Wass de Czege.

"The Field Order—Fast!", by Major James A. Dunn, Jr.





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SEPTEMBER-OCTOBER 1986



# Infantry

ROF-6

JOUB

THE COMBINED ARMS TEAM

*McTear*

A Department of the Army Publication

66th Year

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# Infantry

A PROFESSIONAL JOURNAL FOR THE COMBINED ARMS TEAM

September-October 1986

Volume 76, Number 5

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Infantry is the nerve of an army. (*Francis Bacon: Essays, xxix, 1625.*)





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# Commandant's NOTE



**Major General Edwin H. Burba, Jr.**  
Chief of Infantry

Over the past three years, the Infantry School has probably spent more time on antiarmor weapons than on any other type of weapon system. Replacing the Dragon has been our first priority, because it allows the Infantry to conduct its roles on the battlefield whether it is light infantry or heavy. An Infantry unit that does not have an efficient and effective manportable dismounted system cannot perform tasks such as reconnaissance, counterreconnaissance, breaching, clearing, fixing, suppressing, securing, ambushing, fighting in restricted terrain and built-up areas, and conducting close overwatch to assist tank and Bradley attacks when they encounter heavy resistance.

Our search for a medium system goes far beyond merely finding a replacement for the Dragon, a program currently in technology demonstration. The Marines are improving the Dragon warhead, which we may adopt as an interim system, and tests are ongoing with the French MILAN and Swedish BILL antiarmor systems. The MILAN does offer excellent penetration and performance but it weighs 82 pounds, which means it is not really manportable—certainly not by a single man. Two men can carry it, but three would be needed to carry extra rounds.

What we really need is a new and improved family of Infantry Antiarmor Weapon Systems (IAAWS). This family would include mobile, all-weather, day and night, heavy, medium, and light antiarmor systems that would improve our ability to extend target

acquisition and effective engagement beyond the current limits.

As for a heavy weapon, even as we put TOW II in the field, we knew it was going to be obsolete very quickly. So, as we went through the AAWS-M (antiarmor weapon system, medium) analysis, we also looked at a heavy system. Thus far, we have gotten approval for two TOW product improvement programs that will keep us in the ball game for at least the remainder of this century.

Other technologies may even take the TOW further than that. That is important to us because we as Infantrymen will have to decide whether we want to keep a heavy system on our Bradleys. If we do and we change the technology, the Army must be prepared to pick up expensive vehicle integration costs. We are looking in detail at various options now. Meanwhile, even though the clock's ticking on it, we have to muster up every bit of capability we have to get as much longevity as we possibly can out of the TOW.

We have not ignored Echo Company. We are working hard now with a hypervelocity missile that will not only penetrate a tank but may even knock it over, given the missile's kinetic energy. We are also looking at a fiber optics guided missile (FOG-M), an over-the-horizon system, to mix with the hypervelocity missile in the Echo Companies. (We are thinking of two hypervelocity missile platoons and one FOG-M platoon.)



We also need a lightweight system to replace the LAW that has the ability to kill such lightly armored vehicles as BMPs, BRDMs, and BTRs. We need to be able to bust bunkers. The AT4, a European missile system, weighs 15 pounds and has good penetration for its weight. We are buying the AT4 in large quantities, and it will be issued to our Infantry units in Fiscal Year 1987. The 82d Airborne Division and the Rangers will be getting it first because they have critical deployment requirements.

Meanwhile, we have the Shoulder-Launched Multipurpose Assault Weapon (SMAW) bunker buster. The Marines have gotten good use out of it and are enthusiastic about the system. What we have been looking for all along, however, is a multipurpose weapon that will combine a light antitank killer and a light vehicle killer with a bunker buster. That is a difficult problem to solve because the physics of defeating rolled homogeneous armor and that of defeating reinforced concrete are at opposite ends of the spectrum.

The introduction of the IAAWS should not generate any new MOSs for the employment or maintenance of the weapon systems. The use of 11H crewmen where long-range antitank (LRAT) systems make up only one platoon out of an antiarmor company will help in cross-leveling assets within the company. To achieve simplicity of operation, maintenance, and training, the particular piece of equipment (weapon, acquisition device, vehicle) and its logistical support system will not exceed the capabilities of the current 11B, 11H, 27E, 35H, and 45K MOSs. In other words, we will not need soldiers with exceptional psychomotor skills to operate the systems.

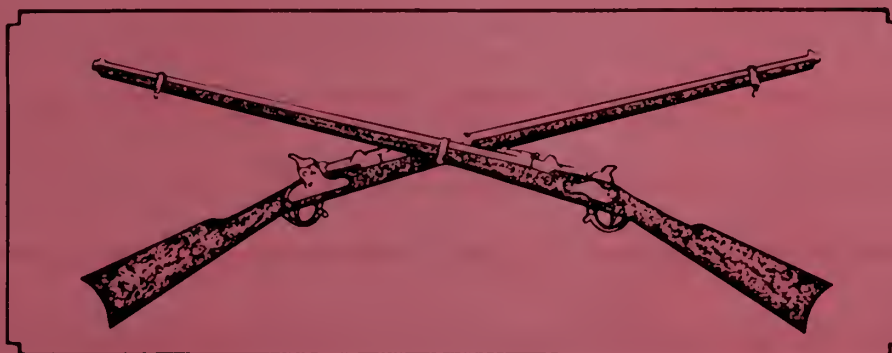
Complete training subsystems will be developed specifically to support all phases of individual and collective training. Even assuming there will be no increase in training-base POI hours, training bases

will still require an increase in instructors and other training resources.

New equipment training (NET) requirements for user testing and system fielding will be considered during developmental testing and completed at the conclusion of operational testing. The training devices needed to support system training will be developed by the materiel developer, and extension training will be developed as required. Our units will be responsible for training enough personnel to make sure their IAAWS will be adequately manned.

The maintenance concept must remain consistent with our current support organizations, concepts of operation, and repair level policies. We must also make the greatest possible use of our existing TOE tools, TMDE, and other support equipment. The vehicle chassis we select for use in our heavy and light forces will have much in common with the other vehicles in our force structure. Although the range and quantity of our repair parts and other supply requirements will be consistent with our current support capabilities, we do estimate that the extended range of the new systems will increase their number of engagements during a battle. Based on improved hit probability, we have to examine our ammunition expenditure rates to forecast the effect on our logistics support system. For example, does a more accurate system require less ammunition?

To sum up, antiarmor fires from heavy, medium, and light systems are critical to the effectiveness of the combined arms team. Without modern antiarmor weapons, the full operational capabilities of our tanks, attack helicopters, and infantry units will never be realized. New antiarmor systems using leap-ahead technology will ensure that our Army continues as an effective fighting force on the modern battlefield. We are now well on track in translating these technologies into reality.



# INFANTRY LETTERS



## VIETNAM EXPERIENCES

Congratulations on the publication of "Infantry in Action: A Foot A Day in Company A," by Brigadier General (Retired) Frank H. Linnell (March-April 1986, p. 32).

It is an excellent account of how the 196th Brigade moved into an enemy dominated area, assessed the situation, determined what needed to be done to gain dominance and then did it, outwitting, outfighting, and outgutting the Viet Cong in the process.

I hope that more Vietnam veterans of all ranks will write about their experiences. Such essays are not only educational but also may help to dispel the belief fostered by the news media, self-appointed military experts, and other uninformed individuals that the U.S. lost the war on the field of battle.

I do have one criticism of the article. I believe the author has been unduly modest in depicting his own role in his unit's actions. Frank Linnell, as a young commander in the 6th Division fighting the Japanese in the Southwest Pacific, was known to accompany combat patrols even though he had no obligation to do so. Therefore, I am sure he took a much more active part in his unit's actions than he has implied, and that on occasion he risked *his* feet along with everyone else's.

DAVID W. GRAY  
MG (Retired)  
Golden Beach, Florida

## LIGHTWEIGHT?

Your magazine is *must* reading for me. But I did note an error regarding the MK19 40mm grenade machinegun in the INFANTRY News section of the May-June 1986 issue (pp. 10-11).

The weapon is lightweight if you hap-

pen to be a powerlifter; at 76 pounds, the gun is a handful for a two-man crew. The MK21 MOD 4 gunmount itself weighs 21 pounds; with a basic load of 800 rounds in 50-round ready cans at 52 pounds each, the total weight comes to 929 pounds!

The HMMWV came along at just the right time for this weapon system. Its increased payload capacity and stability as a gun platform makes the venerable M151 jeep pale in comparison.

The MK19 40mm grenade launcher in combination with the HMMWV will be the mainstay of the military police on tomorrow's battlefield, but lightweight it is not!

MICHAEL C. REILLY  
CPT, Military Police  
Fort McClellan, Alabama

*EDITOR'S NOTE: The weight given in the news item for the grenade gun was 7.6 pounds, an obvious error (but one not so obvious to our proofreaders). Its actual weight, according to the Armament Research and Development Center, is 75.6 pounds.*

## 40mm GRENADE MACHINEGUN

I wish to correct some glaring errors concerning the 40mm grenade machinegun item in your May-June 1986 issue (pp. 10-11).

A 40mm dual-purpose round is nothing new, or impressive. Similar rounds were developed for the M79/203 family of grenade launchers. While it is quite true that a 40mm shaped charge round can penetrate light armor, its pitiful "behind armor" effect is nowhere near enough to guarantee destruction, other than by lucky hits into critical areas.

But that is a minor point. It is the 1,500-meter range claim that is preposterous. FM 101-5-1, Operational Terms

and Graphics, defines "effective range" as that range at which an average soldier has a 50 percent probability of hitting a target with a small arms weapon. It defines "maximum effective range" as the distance at which a weapon can be expected to fire accurately to achieve the desired results.

I readily concede that this weapon can lob a projectile out to 2,200 meters and might even hold a tight pattern out to 1,500 meters, where it might be effective against soft targets. But it is inconceivable that it could hit an armored point target at anything near this range except by sheer luck.

Just look at the photograph in the article and ask yourself, "How is the gunner aiming? Walking in three- to five-round bursts at 1,500 meters and hitting?" Who are we kidding. Where are the witnesses to such marksmanship?

CHESTER A. KOJRO  
CPT, Armor  
Fort Knox, Kentucky

## 82d DIVISION IN ITALY

The article by James Huston, "82d Division in Italy" (INFANTRY, July-August 1985, p. 29) demands a rebuttal.

One would be hard-pressed to find three generals more knowledgeable of military strategy than Patton, Ridgway, and Gavin. On 12 August 1943 in the final days of the Sicilian campaign these three, along with the commander of the 52nd Troop Carrier Group, discussed the feasibility of a parachute drop across the Strait of Messina to block the enemy's withdrawal. They decided not to proceed (it was much too great a risk), and instead General Patton conducted a successful amphibious end run and arrived in Messina even before the British on 16 August 1943.

Mr. Huston disagrees with this deci-



sion twice in the final paragraphs of his article, concluding that the discarded option might have made a "really decisive contribution to the destruction of forces instead of simply in the capture of real estate."

At the time, however, the 82d was at less than two-thirds strength. The author would have made expendable what was at that time the only U.S. airborne division assembled at the very beginning of the Allied Forces shift from a defensive to offensive game plan.

At that time, each of us as an 82d Division paratrooper was armed with little more than an M1 rifle with a limited amount of ammunition, a trench knife, and a couple of grenades. To execute the proposed operation would probably have resulted in Arnhem I!

The author goes on to state, "Instead, the 82d assembled and flew back to Tunisia, there to prepare to fight under less favorable conditions at Salerno the German forces that had escaped from Sicily." Not so! The intended next mission of the 82d was not the Salerno beachhead. The intent was to penetrate deeper, such as to Naples or even Rome.

The author totally overlooks one of the great values of an airborne division. Being off the line preparing for an operation immobilizes much enemy strength simply because the enemy has to be prepared to defend many areas simultaneously — in this instance, any part of the Italian peninsula.

MARVIN W. BAYER  
CPL (Ret.), Infantry  
St. Mary's, Ohio

## VALUES

If I may respond to Corporal Douglas N. Bernhard's letter (May-June 1986, p. 4) concerning my article "On Being A Lieutenant" (November-December 1985, p. 20), I understand and agree with his premise that traditional values of honesty, loyalty, dedication, and so on, are what leadership at any level is all about. I point out, however, that the focus of the article was on techniques of leading at platoon level. While the two cannot be divorced entirely, techniques

differ from ethics and values in the sense that the one is concerned with approach and method while the other focuses on fundamental motivating influences and value systems.

Other authors with more wisdom and ability have, I believe, developed a thorough sensitivity and appreciation in this army for the overriding importance of selfless and moral leadership. Our challenge is to reflect those values without fear or expectation of reward, for no other reason than that it is the right thing to do.

Corporal Bernhard is correct in assuming that I place my faith and my career in respect for my fellows and my men, in hard work, and in a positive attitude. There may be other, surer ways to the top (whatever or wherever that is), but then, it seems to work for me.

R. D. HOOKER, JR.  
CPT, Infantry  
Fort Rucker, Alabama

## ON READING

You did all concerned a service when you published "Professional Reading Program," by Captain Harold E. Raugh, Jr. (INFANTRY, March-April 1986, p. 12). Many such lists have been compiled, but Captain Raugh may have a unique approach in starting it within his own territory of Company B, 5th Battalion, 21st Infantry. He shows a lot of scholarship in making the tough choices for the list, and he has the writing ability to present a convincing essay. (I hope his bosses make his efforts rewarding, but I'm sure he knows they may not.)

I hope the program can eventually include some of the fiction works that are based on our military experience, because those too can be instructive on a personal level. (I will restrain myself from sending a boxful of suggestions.)

On the other hand, I want to submit for his consideration a suggestion on a source book that I think is indispensable for a project such as this, and it may be that he has it on hand. The book is *A Guide to the Sources of United States*

*Military History*, edited by Robin Higgam (now editor of *Military Affairs*, in addition to other duties), Hamden, Connecticut, 1975. (There are also two supplements to the book.) Each category, chronological or thematic, has an essay on sources and then a bibliography of the books mentioned. Even though the book was published in 1975 and costs a cool \$35 now, it's worth the money. And so are the supplements.

ROLFE HILLMAN  
COL, Infantry (Retired)  
Falls Church, Virginia

## MARSHALL STYLE

During the 1985 Year of the Leader, many articles were published on leadership, but nowhere have I seen anyone address the subject more succinctly than George C. Marshall did as a major in 1920. His observations on what constituted the success of the outstanding figures in the American Expeditionary Forces in World War I are as applicable today as they were then.

To be a highly successful leader in war (Marshall noted in a letter to General John S. Mallory), four things are essential, assuming you have good common sense, have studied your profession, and are physically strong.

When conditions are difficult, the command is depressed, and everyone seems critical and pessimistic, you must be especially cheerful and optimistic.

When evening comes and all are exhausted, hungry and possibly dispirited, particularly in unfavorable weather at the end of a march or in battle, you must put aside any thought of personal fatigue and display marked energy in looking after the comfort of your organization, inspecting your lines, and preparing for tomorrow.

Make a point of extreme loyalty, in thought and deed, to your chiefs personally; and in your efforts to carry out their plans or policies, the less you approve the more energy you must direct to their accomplishment.

The more alarming and disquieting the reports received or the conditions viewed in battle, the more determined must be

your attitude. Never ask for the relief of your unit, and never hesitate to attack.

Marshall was certain in his belief that the average man who scrupulously followed this course of action was bound to succeed. He continued to say that few seemed equal to it during the war but believed that was due to their failure to realize the importance of so governing their course.

Marshall's analysis of the essence of military leadership is certainly applicable to today's leaders from fire team to the highest echelons of the Army. He succinctly identifies such important tenets of military professionalism as setting the example, caring for the soldiers entrusted to one's command, total dedication, and unyielding loyalty. Although written 65 years ago by an officer whom many revere as America's foremost soldier of the 20th Century, these words serve as a standard of success for the modern infantryman.

COLE C. KINGSEED  
MAJ, Infantry  
Wahiawa, Hawaii

## TRAIN TO WIN

After participating in a National Training Center (NTC) rotation, with its specially trained OPFOR, I believe we have duped ourselves for too long about the opposing forces, aggressors, or "enemy" in our local FTXs. We have not given our OPFORs the ability to exercise their freedom of action as defined by mission-type orders. In fact, generally we have espoused the belief that because of our ability to make and execute decisions rapidly at all levels and because of "their" great inflexibility, we will thoroughly whip "them" every time. As a result, our FTX OPFORs have cooperated with us, been where they were supposed to be, done what we expected them to do.

But are our potential enemies as inflexible as we have made them out to be? While their technology and sophistication may not be as advanced as ours, they can still think and react. Infantrymen everywhere generally have the same vulnerabilities, the same fears, the

same reactions as a round cracks close by, and they also have the same goal—to win.

We have fostered the "inflexibility" idea through our FTXs where the aggressors are predictably located on all objectives, make little use of patrols, LPs, and OPs, and are normally not found in unexpected places. They seldom use aggressive tactics such as hugging techniques. We use our OPFORs to meet the specific training goals of our particular exercise at the expense of realism in training.

This approach has value during the grooming stages of small units and the training of their leaders, but mature units need to be challenged—not only by the terrain and the weather but by an aggressive, thinking, uncompromising OPFOR. To exercise against anything less creates false impressions, false ideas, and a false sense of well being. It's no wonder that when units get to the NTC, they suffer from "culture shock" as they meet a trained aggressor who moves quickly, who is excellent at using the available cover and concealment and, above all, who uses his God-given ability to try to out-think and outwit his opponent to win.

We need to exercise against a non-cooperative OPFOR in competitive scenarios during our FTXs. This does not mean that each post or unit needs a specially trained OPFOR unit such as the one at the NTC. But the aggressor units in our training exercises should have the freedom to think and react in accordance with sound tactical doctrine, safety, logic, and the exercise director's mission-type orders. This would provide a framework to exercise tactically against a unit that is trying to score a tactical success over another unit. Since none of us likes to lose, the competition would make us all better.

Competitive scenarios would provide the best opportunity to develop the synchronization of all combined arms forces against "real world" intelligence information. A premium would be placed upon collecting and verifying intelligence, which is the key to successful NTC rotations. If the enemy can be located, the full brunt of the combined

arms available in a particular exercise can be synchronized to defeat him (or at least the opportunity is there). If intelligence is poor, however, for any number of reasons, one must "gouge" for the enemy. Although this may be undesirable, it is realistic. Through this process, the real value of adequate and timely intelligence will be apparent to all.

Such non-cooperative OPFOR exercises are possible at all levels. Two squads, for example, could be given a similar mission within the same area. Each would know the other was there *somewhere*. The mission of both could be to clear the area, and one squad would be directly pitted against the other. Soldiers relish opportunities to show they are better than the other guy, and we need to give them such opportunities.

By employing OPFOR units that are *also* trying to win, we all stand a better chance of learning to win ourselves in the long run. To do anything less short-changes our soldiers, our leaders, and ultimately our Army.

EDWARD G. DEVOS, JR.  
LTC, Infantry  
Fort Drum, New York

## 34th INFANTRY, 1950

I have been working on a research project covering the combat actions of the 34th Infantry Regiment, 24th Infantry Division, for July and August 1950.

The true story of the regiment is a unique one and its publication will be beneficial in many respects. In order for me to relate an adequate story, however, I need the input of everyone possible who can provide it. So far, I have received meaningful data and personal narratives from about 35 former members of the regiment for that two-month period in 1950.

Anyone who may have pertinent information may contact me at Box 167, Winchester, Indiana 47394; telephone (317) 584-1280.

LACY C. BARNETT  
MAJ, USA, Retired



# INFANTRY NEWS



THE PRESIDENT of the U.S. Army Infantry Board has submitted the following items:

**M16 Rifle Gowen South.** In November 1980, the U.S. Army Training and Doctrine Command (TRADOC) and the U.S. Army Forces Command (FORSCOM) worked with the Idaho National Guard at Gowen Field, Boise, Idaho, to evaluate training device-based tank gunnery strategies involving simulation, substitution, and miniaturization. This limited initial test indicated that device-based training with less expenditure of ammunition was as effective as the traditional programs.

The concept of that testing has inspired the initiation at Fort Benning of a series of tests that apply the same philosophy to gunner proficiency training for other weapon systems. These Fort Benning tests are called "Gowen South," alluding to the test at Gowen Field. The M16 rifle Gowen South concept evaluation program (CEP) is one such test.

Phase I of the proposed three-phased testing program was conducted by the Infantry Board between 12 March and 15 May 1986. The purpose was to assess the effectiveness and resource requirements of the basic rifle marksmanship (BRM) training programs that incorporate the use of single training devices in selected periods of BRM instruction when compared with the current BRM program of instruction (POI).

Six rifle marksmanship training devices were used in this phase — the Interactive Video Disc Trainer (IVD); the 25-meter Zoned Feedback Device (LASER); the Location of Miss and Hit (LOMAH); the Multipurpose Arcade Combat Simulator (MACS); the Multiple Integrated Laser Engagement System (MILES); and the Weaponeer I.

The performance data used to assess the relative effectiveness of the current BRM POI and the various device-based POIs were generated and collected during selected periods of instruction and

measured by the demonstrated performances of test soldiers in subsequent periods. Human factors, safety, and limited RAM (reliability, availability, and maintainability) and logistical data were collected throughout the tests.

The test results will be used by the Infantry School to develop and refine training strategies and to initiate actions for developing and obtaining appropriate training devices.

**TOW Gowen South.** The current TOW gunner training POI uses the M70 guided missile training device. This device, issued initially in 1970, is becoming increasingly expensive to maintain and does not indicate a soldier's live-fire performance. To take advantage of the current and projected technology for gunnery training devices, the Infantry School analyzed the requirements for the tripod-mounted TOW missile system and developed a series of proposed device-based training strategies that may satisfy these requirements.

In May and early June 1986 the Infantry Board conducted a CEP test of TOW Gowen South to provide information on five selected alternative device-based training programs and the current M70-based program for the tripod-mounted TOW. The alternative training devices included MILES; the Bradley Gunnery and Missile Target System (BGMTS); the Precision Gunnery System (PGS); the Precision Gunnery Training System (PGTS); and the Simulator for Antitank Tactical Training (SWATT).

The tests on these devices were conducted in two phases. Phase I examined basic TOW gunnery training, and Phase II examined advanced TOW gunnery training. The test soldiers were infantrymen (MOS 11B) and cavalry scouts (MOS 19D) from units based at Fort Benning. These 60 soldiers, with no prior TOW training, were organized into six groups. Each group trained either with one of the five device-based POIs or with

the M70 POI.

Upon completion of their training, each soldier completed the Qualification Firing Table prescribed for the M70.

During Phase II, 42 trained TOW crews (MOS 11H) were organized and assigned to POI groups as in Phase I and were trained in advanced techniques requiring them to perform progressively more difficult tracking exercises. At the conclusion of Phase II training, 60 soldiers were selected to fire live (inert warhead) TOW practice missiles.

Qualification scores and live fire hit and miss data were collected from each POI, and logistical requirements, human factors, and safety data were collected throughout the tests. Test results will be used by the Infantry School to develop training strategies and to identify devices for further evaluation.

**Drop Zone Assembly Aid System (DZAAS).** During the period 7 April through 8 June 1986, the Infantry Board conducted an operational test of the DZAAS to assess its operational effectiveness and suitability as an electronic orienting signal to facilitate the rapid assembly of personnel and rapid location and identification of specific equipment loads on the DZ after an airdrop. (See *INFANTRY*, January-February 1985, p. 11.)

Current drop zone (DZ) assembly aids such as VS-17 panels, helmet markings, strobe lights, and chemical lights provide only limited assistance.

The DZAAS consists of a five-pound transmitter measuring 5x6x8 inches, that is capable of transmitting on any of 28 preselected radio frequencies, and a one-pound receiver measuring 3x5x1.33 inches. The transmitter is powered by a standard 24-volt lithium battery, which is expected to last for two hours of continuous operation, and is furnished with two omnidirectional antennas. One of these antennas telescopes to a height of 100 inches and is used for personnel assembly; the other, a 15-inch-long flexi-



ble rubber antenna, is used with equipment loads.

During airborne operations, the transmitter is carried by a designated soldier to the assembly point and turned on manually; or it can be placed on an equipment load and activated automatically as the load exits the aircraft.

The receiver, powered by a nine-volt battery, can be set to receive any one of the transmitter's 28 frequency signals. The system should provide a transmitter-to-receiver link out to at least 1,500 meters. During use, the receiver is worn on the soldier's left wrist. When the soldier's left arm is pointing toward the transmitter, a small light on the receiver illuminates indicating the direction to the transmitter. The soldier moves in the direction his arm is pointing until he finds the transmitter.

The range capability and battery life of the DZAAS and its compatibility with individual chemical protective clothing and cold weather parka and mittens were tested at Fort Benning. Infantry Board jumpers (door bundle chasers) tested the system's ability to find and identify equipment loads.

Data on platoon assembly times were collected during a series of mass tactical jumps conducted by companies of the 82d Airborne Division at Fort Bragg and by a Ranger company conducting airborne operations at Fort McClellan, Alabama. Within each company, one platoon used the current assembly procedures and the DZAAS while the remaining platoons used the current procedures and current aids (panels, lights) to assemble on the DZ.

Throughout the tests, human factors, reliability, operator maintenance data, and test soldier comments and observations were recorded. Test results will be used by the Infantry School to aid in decisions concerning further development of the system.

**Robotic Ranger.** The U.S. Army Tank-Automotive Command, Missile Command, Ballistic Research Laboratory, and a civilian contractor have worked to fabricate a full-scale model of a tele-operated robotic vehicle called the Robotic Ranger. (See also *INFANTRY*, July-August 1984, p. 4.)

Designed within the concept of a low-

cost, tele-operated, disposable round of ammunition to employ various weapons or surveillance packages at locations beyond operator line of sight, the Robotic Ranger has a diamond configuration chassis, which permits pitch articulation and four individually powered wheels.

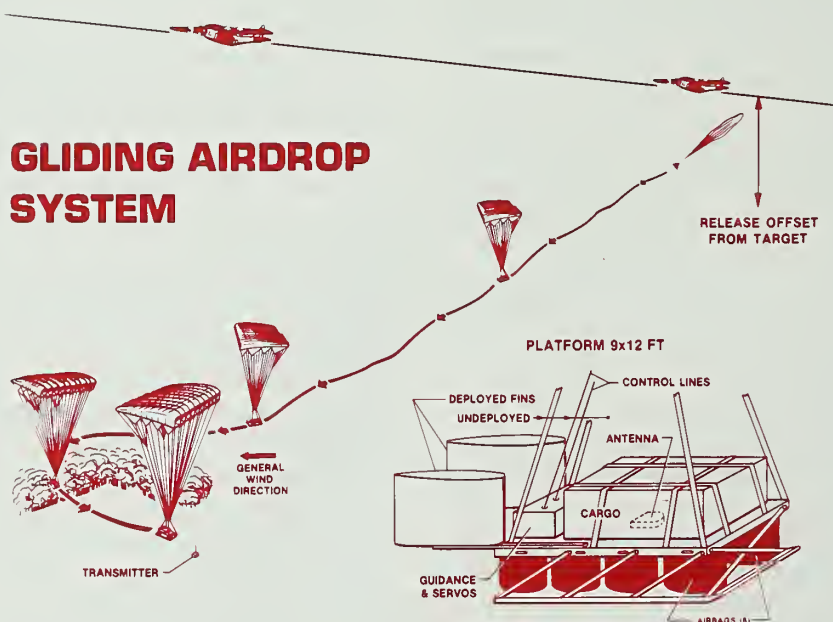
The prototype vehicle is 77 inches long by 53 inches wide, weighs 416 pounds, and is powered by two 12-volt lead acid batteries. It is connected to a control console by a disposable fiber-optic link and can carry a payload of about 70 pounds (M60 machinegun, AT4s, or special surveillance equipment, for example).

AN **AIRDROP SYSTEM** is needed that will allow the clandestine resupply of personnel (such as Special Forces) beyond the forward line of troops while maintaining low vulnerability for the airdrop aircraft.

The Infantry Board conducted a CEP test of the device from 19 May through 17 June 1986 to assess its ability to employ infantry weapons and reconnaissance systems. Four operators used the Robotic Ranger in a series of surveillance missions over predetermined routes, in an armed sentry role (antipersonnel and antiarmor), and to emplace simulated explosives at a bunker position.

Test results will be used by the Infantry School in making decisions concerning further development of robotic devices.

air gliding parachute, an airborne homing and guidance unit, and a transmitter/controller. The canopy will have a glide ratio of about three feet forward to each foot of descent. It will be deployed from altitudes up to 25,000 feet above



The 500-pound Gliding Decelerator Container Airdrop System will permit accurate clandestine delivery of cargo in support of special operations and unconventional warfare forces. High altitude, offset delivery made possible by the system will decrease the risk to cargo aircraft engaged in insertion or resupply. The system will complement existing personnel delivery systems with similar performance capabilities.

The proposed system consists of a ram-

ground level and at aircraft speeds of 130 to 150 knots.

The airborne homing and guidance unit will steer the system in response to radio homing signals from the transmitter. Each transmitter controller can control up to four bundles per mission. A manual mode will allow the operator to steer one bundle at a time to a controlled landing while the remaining units continue to home automatically on the transmitter. The transmitter also has a control that



will enable the operator to flare a canopy for a softer landing.

The unit can be remotely controlled by an airborne paratrooper, a person on the ground, or automatically by a transmitter controller device on the ground.

**OFFICERS AND SENIOR** noncommissioned officers graduating from the Infantry Officer Advanced Course (IOAC) or the Advanced Noncommissioned Officer Course (ANCOC) will be better fit to fight when they leave Fort Benning, and they will have new DA official photos in hand. This is a result of two separate initiatives sparked by Major General Edwin H. Burba, Chief of Infantry and Commandant of the Infantry School.

The first of these initiatives is a vastly improved physical fitness program that is based on the Master Physical Fitness Concept. Although PT has never been a stranger to the Infantry School, student feedback in the past has indicated that physical fitness training in IOAC and ANCOC lacked variety and imagination.

The foundation of the improved physical fitness program is diversity. Conditioning sessions may consist of any or all of the following: platoon circuit training, organized athletics, partner-resisted exercises, and ability-group running. Each session begins and ends with a stretching and cool-down period.

Platoon circuit training can range from log drills or weight training to an occasional trip to the confidence or obstacle course. Circuit training is designed to develop strength, speed, agility, and endurance.

Organized athletics feature intramural contests from squad to company level in flag football, basketball, soccer, volleyball, or softball. The emphasis is on unit cohesion, teamwork, and esprit de corps.

Partner-resisted exercise is a technique whereby one soldier exercises while his partner provides resistance. This formula has proved effective for increasing push-up and sit-up ability, thus leading to higher APFT scores.

The ability-group run allows all participants to increase their speed and endurance without hindering the better runners or demoralizing marginal ones. By



screening the two-mile run times from the diagnostic APFT, the Infantry School cadre divides the students into fast, medium, and slow running groups.

A crucial element in the Infantry School's program is the recognition of excellence. To facilitate such recognition, the APFT scoring scale has been modified to allow calculation of points beyond the maximum score. This enables the School to recognize the student with the highest score on the final APFT and also the student who has improved his score most since the diagnostic test. All students who score 300 points or higher are also recognized.

The second of the commandant's initiatives is a requirement for each student in these classes to submit a new DA official photograph before graduation. These photographs are taken at Fort Benning and reviewed by both the students and the cadre chain of command to ensure that the final product portrays the soldiers as accurately as possible. (The photograph is, of course, an important part of each soldier's Official Military Personnel File since it is reviewed by DA selection boards for promotions and future assignment consideration.

*(This item was prepared by Captain Dan MacGlashing, S-1, 1st Battalion, The School Brigade, USAIS.)*

**THE AIRBORNE SCHOOL's** physical fitness requirements are de-

scribed in the article "Preparing for Airborne Training," by Captain Danny L. Greene in *INFANTRY's* July-August 1986 issue (page 13).

In addition to meeting these requirements, students must also be prepared to take a verification Army Physical Fitness Test on the first day of ground training. Those who fail that test will not continue in the course.

**THE FOLLOWING NEWS ITEMS** were submitted by the Directorate of Combat Developments:

**New Computer System for TOE and BOIP Development.** Tables of Organization and Equipment (TOEs) and Basis of Issue Plans (BOIPs) will be developed using a new computer system. The new system will link the branch schools' organizational development agencies to the organization master files at Fort Leavenworth, Kansas, thus reducing the turnaround time for TOE and BOIP actions.

The heart of the new system will be an INTEL 310 microcomputer using the XENIX operating system and TRADOC-developed software.

This new system standardizes the organizational ADP and offers marked improvements in speed, capacity, and flexibility over the current system. With the planned software improvements, TOE and BOIP personnel will be able to develop documents the same way letters are typed, edited, and corrected on word processors. The expanded capacity will allow the sorting and cross-checking of documents in the data base, eliminating time-consuming manual procedures. The end result for the infantryman will be a more accurate, responsive, and flexible organizational system to meet the challenges of our modern Army.

**M113A3.** Production of the new M113A3 APC will begin in February 1987. The A3 is a product of extensive research and development designed to improve both the performance and the survivability of the M113 family of vehicles. (See *INFANTRY*, September-October 1985, p. 8.)

The modifications to the M113A2 squad carrier consist of three primary components. A RISE power pack improves dash speed, overall mobility, and reliability while reducing weight through



the elimination of the control differential and the transfer gear case. Spall liners have been added to the top, sides, and rear of the crew compartment to reduce the effects of shaped charge warhead detonation and collateral damage resulting from secondary spall.

Armored external fuel tanks mounted above the rear fenders eliminate the hazard of fuel fires within the crew compartment. The fuel tanks are interchangeable from side to side, easily replaced in the field, and provide redundant fuel supply in case one of the tanks is ruptured.

Other modifications include the adoption of a four-battery, 200-amp charging system; a shock-mounted driver's seat; a collapsible driver's foot rest; and a steering yoke that replaces the differential control laterals. Finally, the M113A3 will be produced with mounting provisions capable of accepting a bolt-on, upgraded armor package currently under development.

The first unit is scheduled to receive the new vehicle in June 1987.

**Infantry Mortars.** The 60mm Lightweight Company Mortar System M224 is scheduled to replace the M19 81mm mortar in the light infantry, airborne, Ranger, and air assault companies. Systems are currently in depot and being issued to those units. The distribution of mortars to units not yet activated will be synchronized with the activation or conversion schedule. The basis of issue is two per rifle company.

The new smoke, illumination, and practice rounds are scheduled to be type-classified during the third quarter of Fiscal Year 1987. The high-explosive round was type-classified with the weapon system. The new ammunition will be issued as the old is depleted.

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**THE NATIONAL INFANTRY** Museum has provided the following items:

The World War II amphibious "Duck" that was recently purchased with nonappropriated funds donated by the Fort Benning Officers' Wives Club is now on display next to the bandstand on the Museum grounds. It has been restored by workers of the Directorate of Logistics' Shop Two at Fort Benning.

Other major pieces going on immedi-

ate display are the restored regimental colors of the 2d Regiment, U.S. Colored Troops, used during the Civil War, and a 34-star U.S. flag that was picked up on the battlefield at Gettysburg just after the battle there. It, too, has just been restored. These two large flags will be displayed on the Museum's first floor in the Hall of Flags in handsome wooden cases made by the Directorate of Logistics' Furniture Shop.

The Museum is fortunate to have the workmanship of the Fort Benning labor force available for specialized work on its major acquisitions. In many cases, the expertise would not be available anywhere else in the area and if it were, it would not always be affordable. The caliber of work and pride of workmanship are outstanding.

An impressive display recently installed in honor of the 210th birthday of the nation and the 211th birthday of the infantry is the 50-star flag that flew at Yorktown on the 200th anniversary of the victory there. It hangs suspended from the ceiling and reaches nearly 25 feet down the three-storied curving stairwell with spotlights illuminating it. It is a magnificent sight.

A major exhibit planned for October will incorporate articles that belonged to Brigadier General John T. Corley and loaned to the museum by his family. The exhibit will be centered on the battle of Aachen in World War II, in which General Corley (then a lieutenant colonel) participated. A painting of General Corley and a Frommer, Model 1937, 7.65mm German pistol, which was given to him by German Colonel Gerhard Wilck at the surrender of Aachen on 21 October 1944, will be shown.

The Museum brochure has been translated into Spanish to accommodate the many Spanish-speaking visitors whose numbers have multiplied with the coming of the School of the Americas to Fort Benning. The Museum makes its auditorium and other facilities available to the School for its graduations, orientations, and social functions.

The Seventh Armored Division Association again provided a wreath on Memorial Day for its monument located on the Museum's grounds. The wreath-laying ceremony was conducted by Com-

pany B, 2d Battalion, 69th Armor and was attended by Seventh Armored Division Association representatives from this area, and by Museum staff members and visitors.

A 199th Infantry Brigade reunion group visited the Museum and presented a plaque in honor of Brigadier General William Ross Bond for the Bond Gallery on the Museum's third floor. General Bond was killed in action in Vietnam on 1 April 1970 while commanding the brigade. Funds given to the Museum from his estate were used to purchase furnishings for the gallery area. On display, too, is the flag that covered the coffin at General Bond's burial.

The Museum is pleased to recognize other donations to its collection:

- During Major General Aubrey Newman's recent visit to Fort Benning, he presented the Museum with his 1983 Doughboy Award and an autographed copy of the "FOLLOW ME" Army in Action lithograph poster for which he was the model.

- A German World War II Nazi flag was presented on behalf of the 3d Infantry Division, 15th Regiment, "C" Company Society of the U.S. Army.

- Toy figures and pieces made by German POWs of World War II for the donor have been received.

- Items donated by Major General C.M. Mount (Retired) include uniforms, books, photographs, and U.S. Military Academy memorabilia.

- An autographed copy of his new book, *The 24th Infantry at Fort Benning*, was given by Dr. L. Albert Scipio II.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905-5273, AUTOVON 835-2958 or commercial (404) 545-2958.





## Values for Infantry Leaders

BRIGADIER GENERAL BERNARD LOEFFKE

Values are important to all armies, regardless of ideology, because all armies must have a set of values on which to base their moral strength. Without values, soldiers lack the rallying point that becomes so essential in times of stress.

Our Army's theme of values concentrates on CARING, CANDOR, COURAGE, AND COMPETENCE, and even our competitors have these same values to one degree or another. These are, in fact, basic for the attainment of a proficient fighting force.

Since the Chief of Staff of the Army has recommended that we personalize the Army's theme of values, I have taken these four values and sprinkled them with personal experiences from a 28-year career.

To them, I have added another quality—HUMOR—because without a sense of humor, Infantry leaders will find it most difficult to survive the stressful situations they are going to encounter.

In the end, there is no greater pride than to lead American fighting men. I believe these values help us focus on the ones our soldiers expect us to have.

### CARING

Simply said, troops will respond to a leader who cares. When a new com-

mander comes in, the first thing the soldiers think of is the adage, "We don't care what you know until we know that you care." I still remember my initial encounter with my First Sergeant, during which he asked me to review a statement by an NCO to newly commissioned lieutenants. It went this way, "Sir, we won't mind the heat as long as you sweat with us. We won't mind the cold as long as you freeze with us."

Caring means sharing the same trials as those we lead, and we shouldn't expect congratulations from troops on our leadership techniques. At best, we might be rewarded with humor.

Let me share a letter from one of the soldiers who served in our battalion in Vietnam. His name was Private First Class Jenkins. We had replaced each other in what we called a foxhole exchange program—a private or corporal would exchange positions with the battalion commander for a day and night. At the end of one of these exchanges the soldier left me a letter. It read, "Sir, I respect what you are doing, and the men know that you have their welfare in mind, since you are willing to share with us the hardships and dangers. However, I still don't like the Army. I still don't like being in Vietnam, and my favorite prayer goes this way: 'O Lord, distribute the

bullets as you do the pay. Let the officers get most of them.' Respectfully yours, Citizen Jenkins."

### CANDOR

Our word is only as good as our past record of being honest. Some of us have experienced the stress of battle; all of us have experienced the stress of daily living. There is always the temptation to take short cuts. As a young lieutenant, I was impressed by a colonel's statement of honesty when one of my friends asked him, "What does a lieutenant or captain do if he finds that the colonel is lying?" This veteran commander of some 28 years of service answered quickly, "Don't worry about *me* lying. Just worry that *you* never lie. If the lieutenants and captains tell the truth, the colonels and generals cannot lie, since the truth will be known sooner or later."

Candor in combat can also mean the difference between life and death. If an officer says he is at one location and he is really at another, disaster may ensue. The only officer I ever relieved during my 28 years of service was a courageous captain who, during a time of stress, transmitted a false report. Because his troops were tired, he chose to stop three miles short of his planned location but reported that the unit was at that location.

That night his unit was attacked, and we wasted precious minutes in reshooting the artillery to his correct position. The delay caused a number of his soldiers to be wounded or killed.

### COURAGE

Courage is a value that can be taught. Every day as a cadet at West Point, I walked through the archway of the gymnasium and read the words of General Douglas MacArthur that were inscribed there: "On the fields of friendly strife are sown the seeds that on other days on other fields will bear the fruits of victory." The inscription simply means that we need to have soldiers experience tough, realistic peacetime training so that combat will appear easy in comparison.

A lesson I have never forgotten was my first boxing experience at West Point. In those days we were required to box against classmates we did not know. The rounds were one minute in length. We had a one-minute rest period and then went again for one minute, for a total of two minutes fighting.

My first bout was against a man who had had some Golden Gloves experience. During the first round I made the acquaintance of the canvas on several occasions. The second round was much the same.

As I was being led from the ring I told my tactical officer, a young captain, "That fight wasn't fair. My opponent was much more experienced than I. This was my first boxing experience, and I am told he is even heavier than I am." The captain looked at me and said, "Mister, you didn't learn your lesson." I murmured to myself, "Yes, I did. I was insane to get into the ring." Aloud, I politely asked, "What is the lesson, Sir?" The answer came back, "In combat you don't get to choose your enemy."

This statement has been a constant reminder to me that if our troops are to be successful in combat we have to give them the toughest, most realistic training we can in peacetime. Those who wish us ill are more numerous, have more guns and tanks, and are very professional. We have to be prepared to fight the best.

### COMPETENCE

In our business, incompetence means

the loss of lives. The difference between a mediocre officer and an outstanding officer is determined by what the officer does with his free time. Failure to become as competent as possible in our profession will haunt us in the form of the lives of the soldiers we might lose in battle because of our shortcomings. I live with the memory of the 34 letters I wrote to parents whose sons were killed in the battalion I commanded.

Early in my career I realized that to be an effective infantry commander I should learn how to fly. So much that is done in combat deals with aviation, and the side benefits are many. For example, an aviator learns to speak through a radio, and the radio and telephone procedures we use are most important in creating confidence in those who listen to us for leadership. An aviator is also an expert in weather and navigation procedures—two more items that are necessary in combat. (In a 1985 survey of NCOs, the question was asked, "What do you expect most of an officer?" The answer? "Don't get us lost.")

The ability to become quickly oriented in the air is critical. As commanders, we will often fly in helicopters. From the air we will direct the battle; coordinate artillery and air strikes by both fast movers and helicopters; and constantly give directions. Only an experienced officer can orchestrate these numerous events.

### HUMOR

Leaders must keep a sense of humor. With it we can defuse many sensitive situations, increase morale, and feel good. Most of us are in the Army because we want to be. If we are not enjoying it, we should make room for those others who want to serve.

We should look at the humor in situations and share it. As a young lieutenant, I was asked to interpret for the then Chief of Staff of XVIII Airborne Corps, Brigadier General Richard Stilwell when he spoke to some Brazilian War College officers. My name had come out on a roster as being fluent in Portuguese. In truth, I had not opened a Portuguese book in four years. Unfortunately, I was the only officer identified who could speak Portuguese at all, so I was given the mission.

When I reported to the General the day

before and requested a copy of his speech, he said he was not planning to use notes, that he would speak extemporaneously. The only thing he said to me was, "If I speak for five minutes, you interpret for five minutes. If I make a joke, you make sure you interpret it correctly." I went home to my BOQ and slept very poorly that night, because I wasn't sure what he was going to say, and I wasn't sure of my own capability with the Portuguese language.

The day of reckoning came. General Stilwell would speak for a time and then turn to me for the interpretation. I bravely interpreted as well as I could. The Brazilian officers immediately realized my situation and were diplomatic enough to overlook my many mistakes. Then the real crisis arrived—General Stilwell made a joke. I didn't understand the punch line in English, much less interpret it into Portuguese. In desperation, I told the Brazilians my dilemma, "Dear friends, the general has just told a joke. I don't understand it, but please laugh." The Brazilians not only helped, they went overboard and roared with laughter. General Stilwell turned to me and said, "Boy, they really did like that joke."

From that episode, I learned that the best antidote for a stressful situation is a good laugh. We should be happy that we are in the Army—there are many who can't be.

The basic role of an infantry leader is to keep hope alive. We do this in battle by being in better physical condition than our troops. We do it by being as competent as we can possibly be. Because we are in the most honorable of professions, we must be proud. We are American soldiers.



**Brigadier General Bernard Loeffke**, when he wrote this article, was Chief of Staff of the XVIII Airborne Corps and Fort Bragg. He served three tours in Southeast Asia. He has also served as Defense Attache to the People's Republic of China and as Army Attache to the U.S. Embassy in Moscow.



# More on Infantry

COLONEL HUBA WASS de CZEGE

*AUTHOR'S NOTE: Last year, INFANTRY published my article "Three Kinds of Infantry" (July-August 1985, pp. 11-13). Subsequently, a letter to the editor appeared in the magazine (March-April 1986, p. 7) by Captain Jack E. Mundstock from Fort Bragg, disagreeing with what I had said. This present article is my response to Captain Mundstock's letter.*

Along the broad spectrum of infantry functions, there are three specific areas. Infantry support to rapidly advancing tanks is one extreme, and light infantry operations in mountainous terrain is the other. In the middle ground are the traditional infantry missions that require heavy firepower, position defense, and assault of fortified positions.

Our traditional approach has been to improve our infantry's performance on their middle ground missions. Having served in mechanized, "straight leg," and airborne infantry units of the recent past, like Captain Mundstock, I can say the three weren't all that different. They were designed for the middle ground primarily, with the mechanized infantry being more useful in support of tanks while the others were better in difficult terrain.

With the arrival of the Bradley infantry fighting vehicle and the new light infantry organizations, however, we have a new situation. The Bradley infantry is designed to support the M1 tank, and Bradley infantry is significantly different from M113 infantry — or so my friends who command Bradley outfits are telling me. Although they cannot put as many soldiers on the ground

for dismounted operations, they can more than make up for this with high speed mobility and heavy firepower.

The new light infantry is also significantly different from the previous H-series infantry. It is truly better for mobile operations at night and in extremely difficult terrain. It cannot dig in and hold ground or assault hostile positions as well as what I call "regular" infantry. It cannot carry heavy weapons, pioneer tools, mines, and sandbags as easily. But it is much better at infiltration tactics and is much more mobile in mountainous terrain.

Clearly, when required to do so, both Bradley and light infantry can dig in and hold a fixed position or assault an enemy strongpoint. But by organization, equipment, and training emphasis, neither is best for that role.

## VOID IN THE MIDDLE

Having made our infantry types most effective near the ends of the spectrum, when we convert all active duty infantry to the J-series TOEs, we will have a void in the middle. That was the main point I tried to make in my earlier article.

If the functions at the ends of the spectrum are important, then we need to recognize that the skills required by Bradley and light infantry will be quite different. Not having commanded a Bradley unit (but having commanded an M113-equipped mechanized infantry battalion), I can only imagine the initial culture shock of NCOs who are new to the Bradley. I do know that light infantry tactics require a considerable "mind-set adjustment" for NCOs — even those

who have an airborne background. With the 11M MOS we have already recognized the significant differences between Bradley and other infantry. Since all mechanized infantry units eventually are to be equipped with the Bradley, the current mechanized 11B will become extinct.

I submit that the light infantryman needs attitudes and skills as significantly different from those of the H-series regular infantryman as those of the M113-equipped infantryman are from the Bradley-equipped infantryman. Since we are converting all regular infantry to light infantry, all non-mechanized 11Bs will become light infantrymen. Some may be air assault and some may be airborne, but all will be some variant of light infantry. It is a purely academic exercise, therefore, to speculate whether we would need a separate MOS for "regular" infantry.

Every criticism of both Bradley infantry and light infantry boils down to a perception of their difficulty in carrying out the middle ground traditional infantry chores — the "regular" infantry domain. Just as the missions of supporting the rapid advance of the tank and fighting in different terrain are important, so are the missions of digging in quickly and effectively, converting a village or town into a fortress, or taking those kinds of positions away from the enemy.

The current M113-equipped units are best for those tasks, because they can carry the weapons and equipment required for those missions. We should not give up this important capability. Moreover, we should make our mechanized infantrymen better at those tasks by fo-

cusing their training in those areas and developing the equipment they need either to go to ground quickly or to root the enemy out of the ground quickly. That requires heavy firepower, a great deal of ammunition to sustain fire, and special skills and attitudes. As a mechanized infantry battalion commander, I made a practice of making sure each company has an opportunity to dig itself in *completely* every quarter, because the habits and skills associated with that activity are highly perishable.

## SPECIALIZATION

As I matured in the profession and as an infantryman, I came to recognize that the entire range of tactical infantry functions are important and useful in the larger tactical scheme of divisions and corps. I also recognize that to do them well, we must develop specialized organizations and the people to man them.

It is because of specialization that most armor and artillery NCOs appear impressively proficient compared to the average infantry NCO. That is not to say that infantry NCOs are any less professional or talented, but their craft is much more complex and more difficult to master and would be a great deal easier if they specialized.

For the future, we have chosen to have (basically and functionally) two kinds of infantry (with one possible exception I will mention shortly). The light infantry variants of Ranger, air assault, and airborne are still fundamentally "light" infantry. The motorized infantry of the 9th Division is a "light" variant of the regular infantry. It is more air transportable than M113-mounted infantry, and it has equal or greater firepower. But being lighter in weight, it may not be able to carry all of the equipment and tools regular infantry requires to build fortifications. In fact, the designers of the motorized infantry recognize this and have opted for mobile, cavalry-like tactics, relying on long-range antiarmor systems to keep the enemy at arm's length from the infantry. Such a force may be useful, but it does not replace regular infantry.

Some military analysts have written

about the utility of organizing the U.S. Army into permanent brigades. The best argument goes like this:

- Our current force structure lacks the maneuverability and flexibility of World War II formations in which divisions were packaged as permanent combined arms formations, which were grouped by field armies under corps for tactical missions. During the course of a campaign, divisions could be moved between the corps readily because the corps had no logistical function. Divisions were plugged into field army logistics.

- Today's corps performs all of the functions of a World War II field army and in terms of combat power is probably superior to it.

- Today's division operates over the terrain of a World War II corps and is as powerful. But unlike a World War II corps, it has a division support command (DISCOM) to which all of its brigades are tied, and it is basically a homogeneous force. Often an armored division finds itself in terrain that needs more "regular" or "light" infantry. Likewise, a light infantry division often needs armored and mechanized infantry in portions of its sector.

- We often find a corps trying to generate a reserve, being tempted to pull reserve brigades but stymied by logistics arrangements. The World War II field army merely tapped a corps headquarters to give up its committed divisions to flanking corps and to draw its reserve division and other available reserve divisions into a potent new reserve corps. If our divisions were more like World War II corps and brigade structures, then corps operations would be easier to handle.

- A brigade level force today can wield the combat power of a World War II division, and this is the level at which the primary combined arms ought to be brought together into a permanent team.

- Some say that brigade packages are easier to deploy within joint contingency plans than "brigade slices." This may or may not be true.

If we organized the Army along brigade lines, then I would see infantry organized along the following lines: There would be three kinds of light

infantry brigades each capable of functioning in any corps, under any kind of division. They might be capable of conducting both airborne and air assault operations and there might be fewer of them in our force structure than currently envisioned.

A regular infantry brigade would be composed of three motorized battalions with ample antitank systems and an organic engineer platoon. It would also have a combined arms battalion of tanks and "armored" infantry. An armored brigade would be made up of three combined arms battalions composed of tanks and "armored" infantry in infantry fighting vehicles.

The "regular" infantry would be of two types. Those deployed in Europe would be oriented on the M113A1, the M113A2, or a similar heavy transport with artillery shrapnel protection. Those in the continental United States would be of the "expeditionary" variety, mounted on lighter vehicles but otherwise identical in organization and function. The tanks in the "expeditionary" brigades might be replaced with additional ground antitank systems and attack helicopters, but the infantry soldiers' training and functions would be the same.

The armor brigades, equipped primarily with M1s and M2s, would be the ground striking force.

In addition, I can see two basic types of cavalry regiments. Heavy cavalry regiments would be similar to those we now have. Light cavalry regiments would be developed around light attack vehicles such as those in the 9th Division.

Aviation would also be reorganized as follows:

- Air cavalry regiment organizations would be specially designed for corps screening missions, rear area protection, and flank security. Air attack brigades would be totally air-transportable, deep-strike formations. These would counterattack in the defense or exploit armored breakthroughs in the attack. For employment, they could be attached to a division. (It is conceivable to have two armored and two air attack brigades under a division.)

- Combat assault brigades composed of mostly lift and escort helicopters, at corps level, would be either attached to





Soldiers from the 25th Infantry Division during Team Spirit 86 in Korea.

divisions that were made up entirely of light brigades or detached as necessary. They would have primarily general support or direct support missions within divisions. But being corps assets, they could be moved and regrouped as necessary.

- Heavy lift brigades composed of heavy lift helicopters would be assigned to a corps to support its combat and logistical lift requirements. They could quickly reposition light infantry brigades and their supporting artillery. They could also support the rapid advance of armored brigades and air attack brigades by moving field artillery and supplies forward.

Artillery organizations would also have to undergo transformation, and robotics could do much to reduce the

number of soldiers required in battery and support roles.

Brigades would have organic artillery to provide close support and countermortar fires. (A good case can be made for having a battalion's indirect support systems manned by artillerymen.) Corps artillery should all be long range, and its functions should be to reinforce division artillery fires, to provide counterbattery fires, and to conduct deep interdiction fire missions.

Divisions would become like World War II corps with appropriate division troops but no logistics functions. The current DISCOM functions would either go down to the brigades or back to the COSCOM (corps support command).

Like the old corps artillery, the division would have a DIVARTY (division

artillery) of about three battalions of long-range tube artillery. MLRS (multiple-launch rocket system) battalions could be attached from corps artillery. All tube artillery would be either in DIVARTYs or BRIGARTYs (brigade artilleries). There would also be air defense, signal, engineer, CEWI (communication, electronic warfare, intelligence), cavalry, military police, and aviation troops appropriate to the division.

All divisions would be capable of handling any configuration of brigades and regiments from two to five in number. Division troops based in the continental United States would be equipped for easy transportability; some would be airborne and more light forces oriented. The commanders of these divisions might command three like brigades or a mix of two to four of several different kinds.

During wartime, brigades would be assigned to corps for extended periods and COSCOMs would be specifically tailored to support war plans. Some COSCOM units might be stationed on division posts to provide peacetime support.

Divisions and corps would be given primary and alternate missions for contingency planning. Brigades might be assigned to different divisions based on contingencies and war plans.

Obviously, I am not looking at the implementation of any such organization in the immediate future, and I realize that these ideas don't coincide completely with Army 21 concepts. But for several years, during my tenure at Fort Leavenworth both as a doctrine writer and as director of the School of Advanced Military Studies, I have looked at our ability to wage war with our current organizations from top to bottom. Therefore, although my conclusions may be controversial, I do not think they are trivial.



Colonel Huba Wass de Czege served with airborne infantry units in Germany and Vietnam, as a Ranger advisor in Vietnam, and with both regular and mechanized infantry units in the 9th Infantry Division. He now commands the 1st Brigade, 7th Infantry Division.

# Physical Fitness Program

LIEUTENANT COLONEL ROBERT J. HOFFMAN

Since 1983, the Army's Soldier Physical Fitness School at Fort Benjamin Harrison, Indiana, has been working to improve the Army's overall physical fitness program. This involved revising FM 21-20 and reexamining the standards applied to the Army Physical Readiness Test (APRT), which many considered too easy. As part of the renewed emphasis on the word "fitness," the test has been retitled the Army Physical Fitness Test (APFT). The new test, which will include generally tougher standards, will take effect 1 October 1986.

In revising FM 21-20, the Fitness School reviewed available civilian research and literature and evaluated its applicability to the Army. One finding showed that while there was fairly good consensus about what the principles of fitness were, there was some disagreement, even among the experts, with regard to their variables. The School's staff, therefore, established guidelines for these principles on the basis of the needs of the Army and the time available for physical training.

In the past, the Army's physical fitness program was based almost entirely upon running, with little information in the manual about strength or flexibility training. The principle change in FM 21-20, accordingly, is based upon an attempt to give equal emphasis to all aspects of physical fitness—flexibility, muscular strength, muscular endurance, cardio-respiratory endurance, and body composition. (Because body composition is covered by AR 600-9, it is addressed in FM 21-20 only in the context that the training in the other four components, along with proper nutritional habits, will

contribute toward attaining the desired ratio of body fat-to-lean muscle mass.)

Flexibility seemed to be the most neglected of the components in the past. Warming up was normally done using Conditioning Drill 1, 2, or 3. In reality, however, the word "conditioning" was a misnomer in that these exercises did little to condition the body. They were actually dynamic stretching exercises and may have been injurious when used to begin an exercise session. In fact, the Surgeon General has accumulated data over the years that documents the dangers of certain conditioning drills. Thus, those that were considered potentially injurious have been eliminated and the remaining exercises are now termed *calisthenics*.

## WARM-UP

Another area of concern centered on how to begin a warm-up. Some experts recommended beginning with static stretching while others said there should be some activity to warm the muscles before static stretching. The Fitness School chose the latter method.

The first activity in a warm-up period should be just strenuous enough to elevate the heart rate, raise the temperature of the muscles, and perhaps cause a little sweating. Marching from a company area to a PT field, or jogging in place for one minute, should suffice.

Static stretching means using slow, smooth movements to stretch the muscles instead of using jerky, bouncy movements. Stretching should be done to the point of mild discomfort, but it should never hurt. Flexibility varies from one

person to another and should never become a contest. Once the muscles to be used in the day's activities have been stretched, calisthenics may be performed to warm up further. The entire sequence can be completed in five to seven minutes.

The new manual presents static stretches and calisthenics in a menu-type format, allowing a commander to pick the exercises most appropriate to his unit's needs and planned activities. These are not all inclusive, but some exercises are listed for all major muscle groups.

As for muscular strength and endurance, information about these subjects was woefully lacking in the old manual. Chapter 3 in the revised manual discusses the principles of strength training (see Figure 1) and identifies the major muscle groups. Exercise programs are presented in which partner-resisted exercises, free weights, and exercise machines are used.

Partner-resisted exercise (PRE) is a form of strength training in which a person performs an exercise against a partner's resistance. With the scarcity of equipment in the Army, PRE is an excellent way of developing the necessary muscular strength and endurance. As a bonus, it can be taken to the field.

In discussing the principles of strength training, Chapter 3 defines repetitions, sets, and workloads. As a general rule, muscular *strength* is best developed using relatively heavy resistance and relatively few repetitions. On the other hand, muscular *endurance* is improved by more repetitions with less resistance. It appears that an acceptable mixture of strength and endurance will result from



doing 8 to 12 repetitions with enough resistance to cause momentary muscle failure. (Resistance can be stated as a percentage of the weight that can be lifted in one maximal effort. Momentary muscle failure occurs when it becomes impossible to perform another correct repetition through the range of motion required for the exercise.)

For any number of reasons, cardio-respiratory endurance training has been the cornerstone of most fitness programs. The running boom has been evident throughout our society for the past 10 to 15 years. Running is something that can be done almost anywhere, it requires little or no equipment, and people seem to understand the basics pretty easily. The revised FM explains how long, how hard, and how often cardio-respiratory training must be conducted to achieve a training effect. In addition, the manual discusses alternate aerobic activities such as road marching, swimming, biking, walking, and cross-country skiing.

To answer the question of how often, how hard, and how long exercises must be done, and of what type they should be, the Fitness School teaches the use of the acronym FITT—frequency, intensity, time, and type.

**Frequency.** To achieve a training effect, each component must be done at least three times a week. This supports the principle of regularity. But if three

times a week is good, is seven times a week better? Probably not. Trainers must also adhere to the principle of recovery. Research indicates that muscle groups must be allowed at least 48 hours to recover from a bout of hard exercise. The School therefore advocates a hard day/recovery day concept, whereby the same muscle groups are exercised at high intensity every other day. An example might be to run at Target Heart Rate (THR) for 30 minutes on Monday, Wednesday, and Friday, with shorter, slower runs on Tuesday and Thursday. Within this structure, strength training might be done on Tuesday, Thursday, and Saturday, with Sunday a day of complete rest. Weight-lifting enthusiasts might incorporate this concept by training the upper body on Monday, Wednesday, and Friday, and the lower body on Tuesday, Thursday, and Saturday. There are many possible combinations.

**Intensity.** For cardio-respiratory exercise, the School teaches how to calculate and use THR (see Figure 2) to measure the intensity of exercise. For muscular strength and endurance training, intensity means resistance; for flexibility, it means stretching to the point of mild discomfort, not pain. But because it is difficult, if not impossible, to achieve the proper intensity for everyone during group physical training, the Fitness School recommends two methods to offset this problem—

ability-group running and exercise in sets.

For ability-group running, soldiers are divided into groups of as near the same ability as possible. (The soldiers' times on their most recent two-mile run can be used, for example.) For a company, three to six groups should be enough, depending on the number of leaders available and the range of ability. Each group would then run at a pace fast enough to attain THR. This would ensure that more soldiers receive the greatest possible training benefit from the run.

Much the same procedure can be followed for push-ups and sit-ups. A specific number of repetitions of each of these exercises will not result in uniform training for all of the soldiers in a company. Exercise in sets can produce good results if the concept is properly applied. There are two methods that may be used.

In the first, each soldier establishes the maximum number of push-ups and sit-ups he can do. The company commander then chooses a percentage of those numbers—usually 50 or 75 percent—for a workout. Each soldier then does three sets of that number of repetitions with a predetermined rest period between sets. As a result, everyone does *relatively* the same amount of work.

Another method is the use of timed sets. For example, everyone would do as many push-ups as possible in one minute, rest for 30 seconds, and repeat this two more times. Those who could not do push-ups for the entire minute could use their knees, or just lower themselves, but keep exercising for the specified time. These two methods help individualize training, thereby producing better training effects.

**Time.** With regard to cardio-respiratory endurance, THR must be maintained for at least 20 minutes. For muscular strength and endurance training, "time" translates to number of repetitions; for flexibility training, it refers to how long a stretch is held.

**Type of activity.** For each component of fitness, there are several different activities. Those included in FM 21-20 are intended to produce the desired training effects and to give the program variety, but commanders should not feel limited to these activities. As long as an activity

## PRINCIPLES OF EXERCISE

1. **REGULARITY:** Exercise must be done on a regular basis. Sporadic exercise may do more harm than good. Regular rest, sleep, and eating habits also make it more beneficial.
2. **PROGRESSION:** The duration and intensity (overload) of the exercise should be gradually increased over time. The idea is to allow for increased fitness levels, but not to try and increase these demands too rapidly.
3. **OVERLOAD:** The muscles and systems must be given a workload that exceeds normal demands.
4. **BALANCE:** A good program includes activities that improve cardio-respiratory endurance, muscular strength, muscular endurance, flexibility, and body composition.
5. **VARIETY:** A varied exercise program prevents boredom. When it includes sports or team activities, the competition improves motivation.
6. **SPECIFICITY:** Training must be geared to the desired result. Soldiers get better at what they practice.
7. **RECOVERY:** Hard days of training should be followed by easier days to permit muscle recovery and to prevent injury. Exercising alternate muscle groups each day and allowing for sufficient rest will increase the benefits of exercise.

Figure 1



is safe and produces a training effect, it has a place in the program, and if soldiers enjoy it, this is all the more reason for including it.

An often neglected part of an exercise session is the cool-down. The key is to prevent the pooling of blood in the lower extremities and help to return it to the heart. Walking and stretching are good exercises for the cool-down. Soldiers should walk until their heart and breathing rates have slowed to near pre-exercise levels, while stretching may reduce stiffness and soreness the next day. Four to six minutes should be enough for the cool-down period.

In addition to these various aspects of physical training, there are also special programs to meet special needs. In the past, little effort has been made to differentiate between unfit and unmotivated soldiers. In fact, "remedial" PT squads have often included soldiers who were overweight, over 40, or on profiles. But each of these groups has different needs and should not be summarily lumped together for physical training. Many overweight soldiers, for example, can do quite well on the APFT. What they need is counseling on diet and nutrition, not necessarily extra push-ups. Other soldiers may do quite well on the two-mile run but have trouble with push-ups. They may respond best to running for five minutes less and devoting those five

minutes to additional, supervised push-up improvement drills.

The Fitness School contends that these special programs should be conducted at the same time as regular PT, with careful attention to their development. Addressing these various needs requires careful management. But the soldiers will recognize that their special needs are being considered, and their motivation should improve because of it. Master Fitness Trainers (MFTs) are well qualified to develop these special programs, and FM 21-20 contains information on them.

The School also found that, in the past, planning for physical training had been generally neglected. Planning for PT, however, is just as important as planning for field training, and each session should be planned so that it contributes to the combat readiness of the unit. Master Fitness Trainers can also help commanders develop short-, medium-, and long-range fitness plans for their units.

A typical company physical training session might look like this: Led by the MFT, the company starts out with five minutes of static stretching, with emphasis on the muscle groups that will be used in that day's conditioning period. The company does eight partner-resisted exercises (16 minutes) and then breaks down into ability groups for a 30-minute run at target heart rate. Those who have failed push-ups and sit-ups on the APFT

run for only 25 minutes and use the other five minutes to work on push-ups or sit-ups, supervised by the MFT. Soldiers with profiles exercise within their stated limits. Those who cannot run can swim or ride a stationary bike for 30 minutes at target heart rate.

This exercise period is conducted in running shoes and is considered a "hard day." The next day is a recovery day, when there will be a company run with drills for improving push-ups and sit-ups.

## APFT

The overall tougher standards on the new APFT were based on a number of obvious deficiencies in the old standards. For one thing, a two-mile run is the one event in which an estimate of the energy cost can be made—for each speed, the amount of oxygen required per minute for unit of body weight can be estimated. (This is called  $VO_2$ .) Under the old standards, the  $VO_2$  required of men in the 17 to 25 age group at the 60-point level was less than that required of the average 40-year-old man. We certainly expect our youngest and theoretically fittest soldiers to be in better condition than the average 40-year-old. (Even the new standards require a fitness level no higher than that of the average college-age male, but the School did not want to move too fast on this issue.)

Another deficiency in the test was the age groupings. When APFT scores were examined on an age basis, it appeared that we were unfairly asking 25-year-old soldiers to compete against the same standards as 17-year-old soldiers. Close inspection indicated that more homogenous groupings would result from dividing the population at five-year intervals. The new age groupings are 17-21, 22-26, 27-31, 32-36, 37-41, 42-46, 47-51, and 52+.

Along with the realignment of age groups, standards were developed for soldiers 40 years of age and older. Previously, the extremely low pass/fail standards may have been telling the older soldiers that fitness was no longer important. In fact, however, a high level of fitness may be even more important to our command sergeants major and battalion and brigade commanders than to

## TARGET HEART RATE

To calculate your THR, you must know your Resting Heart Rate (RHR). RHR is best determined by taking your pulse for a full minute immediately upon waking in the morning. You can also estimate it by taking your pulse for one full minute after sitting quietly for at least five minutes.

You must also decide on the level of intensity you want for your workout on the basis of your level of conditioning:

60% - Unfit

70% - Fairly Fit

80% - Very Fit

90% - Exceptionally Fit

Obviously, the higher the percentage, the more intense the workout. Therefore, the more fit you are, the higher percentage you should choose for a workout. A very fit person may do workouts at 80% on hard days and 60% on recovery days.

Once you know your RHR and have chosen a level of intensity, you can calculate THR as follows:

Step 1:  $220 - \text{Age} = \text{Maximum Heart Rate (MHR)}$

Step 2:  $\text{MHR} - \text{RHR} = \text{Heart Rate Reserve (HRR)}$

Step 3:  $\text{Desired Intensity (\%)} \times \text{HRR} + \text{RHR} = \text{THR}$

A very fit person may do workouts at 80% on hard days and 60% on recovery days.

Figure 2



younger leaders at lower levels. Furthermore, under the new test all soldiers will be tested the same—against the standards. (In addition, the Fitness School in its research found no physiological reasons to prevent women from doing as many sit-ups as men can. In fact, the data showed that women in the field were doing as many sit-ups as men and in some cases more.)

Under the new standards, soldiers will no longer be able to pass the APFT without training for it, and these standards require fitness levels that are more in line

with the fitness required of soldiers on the battlefield.

Fitness is a dynamic subject with new ideas always being developed. The Fitness School therefore continues to evaluate all new research and literature for its applicability to the task of improving combat readiness. We pass these ideas on to the field through the Master Fitness Trainers and through various briefings and presentations.

It is equally essential to this effort that the School receive feedback from the field on physical fitness—what works and

what does not, for instance, and what alterations get better results in warm-weather locations or what adaptations must be made for cold weather.

In all these efforts, our overriding concern is to improve combat readiness. Together we can do it.

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Lieutenant Colonel Robert J. Hoffman is assigned to the Soldier Physical Fitness School. Previously, he commanded Special Forces, Ranger, and mechanized infantry units and taught in the Department of Physical Education at the United States Military Academy.

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# SWAP SHOP



## LOST MAN DRILL

An individual soldier (or an element) sometimes becomes separated from a small patrol, usually when crossing linear danger areas or natural obstacles that slow individuals in the rear of the formation while those in the lead continue at a normal pace.

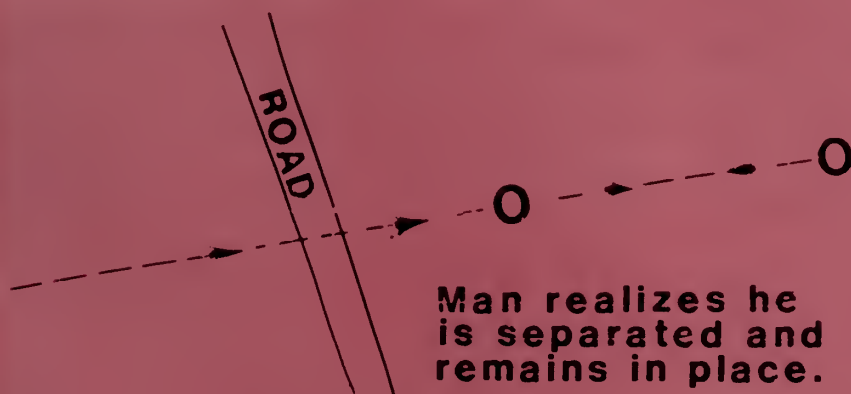
When a soldier realizes he has become separated and there is no one in front of him, he must halt *immediately* (in a concealed site), listen for the patrol's return, and challenge it quietly.

When the lead element (even if it is just one man) discovers a man has separated, it should immediately halt and listen for

sounds of the man's movement or for foul play. If the separated man does not link up within one or two minutes, the entire patrol (to prevent further separations) should retrace its route until it is challenged by the separated man. Once all personnel are accounted for, the patrol can continue its mission.

Unit SOPs should specify what the separated man will do if linkup does not occur within 15 to 20 minutes — proceed to designated rally point or return to friendly lines, for example.

This drill will work only if all patrol members are familiar with it and have rehearsed it and if both elements conduct the prescribed procedures.



(Submitted by SFC Gordon L. Rottman, Company G (Ranger), 143d Infantry, Texas Army National Guard, Houston.)



# ILLUMINATED



## NIGHT ATTACK

**CAPTAIN ROBERT G. FIX**

A night attack presents some unique challenges for the infantry in terms of command and control, movement to and maneuver on the objective, and the integration of fire support assets. Night attack training raises some real questions for an infantry company commander (light, air assault, or airborne): Should the attack be supported or nonsupported, illuminated or nonilluminated? Will the scheme of maneuver use so-called conventional tactics (wire, release points), or will daylight tactics be used (overwatch force, maneuver force)? How many night vision goggles are available to the company? Will its ammunition allocations provide the artillery and mortar illumination necessary? Is high-explosive ammunition available to fire a coordinated mission?

Presented with these challenges, a battalion of the 101st Airborne Division (Air Assault) had an opportunity to examine the night attack exercising three different techniques on the same objective.

This opportunity grew out of an external evaluation of the 3d Battalion, 187th Infantry, in which the battalion had carried out extensive night operations while conducting missions within a mid-intensity scenario. During the after-action review, it was noted that the company tactics employed on two separate nonilluminated night attacks had been a mixture of day-

**CAPTAIN FRANK H. RICE**

light and limited visibility tactics. The key leaders said that although daylight tactics, according to doctrine, are employed during an illuminated attack, they are often substituted for tactics that should be used during a traditional nonilluminated night attack.

This raised the issue of whether traditional night tactics might be too cumbersome and outdated. Further discussion brought out an interesting tactical dilemma: If an attack that begins nonilluminated is illuminated at some time during the attack, a company might be caught in the middle of executing night tactics where daylight tactics would be more appropriate. Although we arrived at no "approved solution," this did give us an opportunity to look more closely at three different ways of conducting such attacks—a nonilluminated night attack, a night attack by infiltration, and an illuminated and supported night attack.

The traditional nonilluminated night attack, as history shows, is one of the most difficult missions for any infantry unit to plan and execute. More stringent control measures must be used, and wire is the primary means of communication. Companies systematically use a point of departure (PD) when crossing the line of departure (LD) at night, then deploy on line using a series of release points. A probable line of deploy-



ment (PLD) helps the company maintain its attack formation as it closes upon the objective.

Unfortunately, this method of attack is somewhat restrictive, because it often leads to a frontal assault in order to bring the full strength of the unit's firepower against the enemy. Also, if the PLD is not perpendicular to the direction of attack, it is difficult to keep the unit on line and oriented on the objective. In short, this tactic often sacrifices maneuver and flexibility for increased control.

Infiltration is a more innovative maneuver to use in conjunction with a night attack. If the enemy has widely separated defensive positions, a commander may choose to bypass the strength of the defensive positions and infiltrate his units to a position from which they can conduct combat operations in the enemy's rear area. Ideally, the objective would be unoccupied key terrain that would compromise the enemy's defensive positions and force his withdrawal.

Such favorable conditions are rare, however. More realistically, a night attack conducted by infiltrating the enemy's forward trace would take the form of a raid. Each sub-element (support, assault, and security) would infiltrate to its respective position, conduct the assault, and then hold the key terrain until relieved, or until it exfiltrated. Operations of this sort are possible at company and battalion level, but they require an extremely high level of training. After all, an infiltration is a highly complex operation—the sub-elements leave friendly forward lines from several departure points, then move along multiple lanes at different times to link up at a single rendezvous point, all during hours of limited visibility. By any standard, this is a tall tactical order.

A night operation that incorporates infiltration to respective support and attack positions requires soldiers of the highest caliber. And few infantry units have the personnel stability they need to sustain the proficiency necessary for this maneuver.

## PRACTICAL SOLUTION

A more practical solution for coping with the problems of control during limited visibility operations is to plan for the use of illumination. Although current doctrine supports this idea, it is unclear as to the best time to employ illumination and what tactics should be used once an attack has started.

Current doctrine (FM 7-10) states that "a night attack that initially begins nonilluminated should have illumination planned, regardless." Additionally, the illumination should not be used until the assault begins or until the attack is detected. The current manuals also tell a company commander conducting a nonilluminated attack that if he is detected before crossing his final control point, he should initiate illumination and continue as if it were a daylight attack.

But there is a radical difference between traditional night tactics and daylight tactics, and to succeed in using daylight tactics at night under fire (even with illumination) would be difficult. There are just too many variables.

A unit needs to have a specific time, place, or set of circumstances for initiating illumination, and every soldier should know and understand it. Knowing in advance that illumina-

tion will be used would give both commanders and soldiers more freedom. Under illumination, leaders could then concentrate their efforts on their maneuvering elements using the control measures associated with daylight tactics instead of wasting time and energy trying to use nighttime tactics. The commander would also have more flexibility because he would no longer be locked into release points and PLDs, which make for a set-piece maneuver. Instead, the use of an assault position in which an overwatch element could deploy into its attack formation would be ideal.

As far as the soldiers are concerned, their self-confidence would be increased by the knowledge that illumination would help them place and control direct fires—a real danger *without* illumination.

We concluded that illumination should prove to be the best method to use in a night attack. And our battalion's training exercise confirmed this conclusion.

## CONDUCT OF EXERCISE

This is how we conducted our exercise:

The battalion deployed to the field, and while most of the battalion conducted squad external evaluations, Company A conducted the three variations on the night attack. On the first night, the company conducted a nonilluminated attack and encountered the same problems normally associated with a "traditional" night attack. Surprisingly, though, the use of wire for communications was not a problem. In fact, because of planning and several rehearsals, the use of wire was a rather simple and successful addition. Wire was used effectively down to the platoon level while maintaining communications with battalion. The only real problem was the limited amount of wire and number of switchboards authorized by the TOE.

The company used release points successfully and, in short order, deployed on line in the direction of the objective. Because of terrain limitations, however, no recognizable PLD was available, and the unit encountered its first problems as it moved forward to attack. Control of the formation quickly diminished as rugged terrain and darkness hindered the company's movement.

As the enemy initiated contact, the control of maneuvering soldiers and of direct fires deteriorated. Once the objective had been seized, consolidation and reorganization took on a new meaning as soldiers tried to regain contact with their elements.

They performed as well as could be expected on unfamiliar terrain, with no illumination, against stiff resistance, and with enemy obstacles to breach. Nonetheless, in actual battle, heavy casualties probably would have been incurred from the lack of control and from friendly fires.

On the second night, the company executed an infiltration into the objective area. The overwatch element used one lane, and the maneuver element moved along another, leaving from separate departure points at different times. The commander simplified the infiltration by not dividing the separate elements into smaller sub-elements. Consequently, no linkups were required in the objective area. This sacrificed stealth for the sake of control, yet adhered to the principles of the maneuver tech-

nique. Because the maneuver element was smaller (two platoons instead of three), soldiers and direct fires were easy to control once the attack began.

Finally, on the third night, the company executed an illuminated and supported night attack. In preparation for this last variation, maneuver space was selected to provide an objective area adjacent to an artillery impact area. Firing points were carefully selected for the 81mm mortar platoon and a battery of 105mm howitzers. These positions enabled the indirect fire support elements to make the most of their illumination capabilities within safety constraints.

Once this was accomplished, fire support planning was conducted by the battalion fire support officer, the company commander, and the company fire support officer. Plans were made for supporting fires along the route, on the objective, in blocking positions, and just forward of the limit of advance. Since illumination rounds were in short supply, the unit was instructed to be as frugal with them as possible. Consequently, a lateral spread of only two rounds was planned, but this proved to be more than adequate—ideal, in fact.

The company crossed the LD and moved in column to its assault position just at EENT (end of evening nautical twilight) and as preparatory fires began to hammer the objective. The support element split off and assumed its overwatch position as the maneuver element cleared the assault position and swung wide to attack the enemy's flank. As the assault element neared the enemy's triple-strand concertina wire and booby traps, preparatory fires were lifted and direct fires begun. As the support element opened fire, the illumination was initiated and the company aggressively breached the obstacles and maneuvered across the objective.

The illumination greatly improved the control of the maneuver force and the supporting fires, because it allowed the soldiers to conduct fire and movement freely and also allowed

the support element to acquire targets safely until their fires were lifted and shifted. Additionally, the unit was able to consolidate and reorganize quickly because it was not as intermingled as during the nonilluminated attack. By and large, illumination closed the gap between utter confusion and a well-controlled night operation.

The battalion's leaders and soldiers learned a great deal from this opportunity, because we were able to exercise three different versions of the night attack. The tasks and standards remained the same, but the conditions varied. The results also varied. Unequivocally, the illuminated and supported night attack conducted with daylight tactics proved the most successful. That is not to say this is the approved solution, but it does point out the need for leaders to continue examining different techniques and ideas.

The battalion found a better way to incorporate illumination into its night operations, and the 101st Airborne Division now has a training vehicle for other companies and battalions to use in executing their own illuminated and supported night attacks. The end result will be an improvement in the division's proficiency during hours of limited visibility.



**Captain Robert G. Fix** was the project officer for the illuminated night attack by the 3d Battalion, 187th Infantry, in which he commanded Company C. A 1981 graduate of the United States Military Academy, he also served as platoon leader and executive officer with the 1st Battalion, 503d Infantry at Fort Campbell.



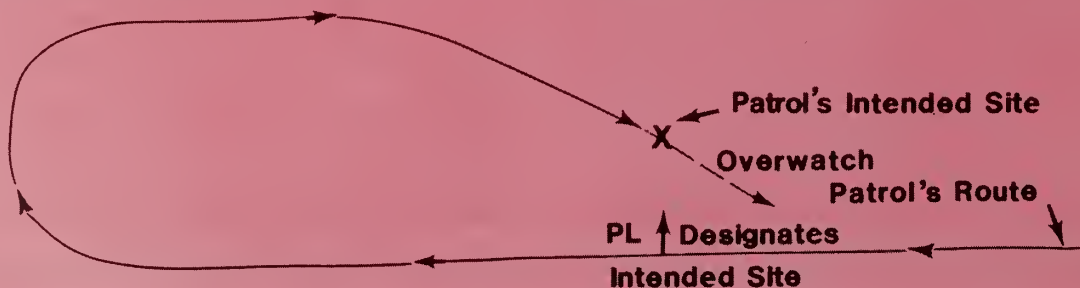
**Captain Frank H. Rice** is commander of Company A, 3d Battalion, 187th Infantry. Previously he served as a rifle platoon leader, company executive officer, and adjutant with the 1st Battalion, 35th Infantry, 25th Infantry Division. He recently completed the Infantry Officer Advanced Course.

## SWAP SHOP



Patrol sites should be occupied only during periods of limited visibility. The patrol leader designates the patrol site (ORP, OP, patrol base) as the patrol passes it. The patrol continues moving on the same azimuth, passing the site and not moving through it. About 100 to 200 meters past the site, depending on the terrain, the patrol makes a loop and enters the site from a different direction without crossing its route.

The patrol establishes a perimeter with the patrol leader designating each man's position (this should be preplanned and rehearsed). A grenadier and a squad automatic weapon gunner should be the first into the site, and they should establish an overwatch on the patrol's original route. The patrol is then prepared to ambush a pursuing force or to evacuate the site as the situation requires.



*(Submitted by Sergeant First Class Gordon L. Rottman, Company G (Ranger), 143d Infantry, Texas Army National Guard, Houston.)*



# THE FIELD ORDER



MAJOR JAMES A. DUNN, JR.

All of us, at one time or another, have pondered over an immense operations order or plan (OPORD, OPLAN). Whether it was writing one in an officer advanced course or the Command and General Staff Course or reading some volume published by higher headquarters, we had to marvel at the amount of information such an order contained.

Our Army has a specific format for these OPORDs and OPLANs, and it is indeed the mark of a skilled staff officer (commissioned or noncommissioned) when he can prepare one "by the book." Remembering what comes first (is it annex-appendix-tab or annex-tab-enclosure?) and recalling how to number the pages (1-N-1-A-1) takes a special knack—most of us have to have an example nearby to be sure we have it right.

Although these monstrosities are useful when time is plentiful, a "field order"—written in a tent or the dimly lit interior of an M577 extension and reproduced on a mimeograph, "jelly roll," or diazo machine—is an entirely different matter.

One problem with this type of order is the time available for preparing it. All ARTEPs and staff manuals prescribe how much time an echelon of command can spend in preparing its order. Any staff operator, from the division G-3 to the tank battalion's operations sergeant major, can tell you his echelon has one-third of the total remaining planning time to prepare and issue its order. Thus, if the mission execution time is 30 hours away, the brigade may use 10 hours of that time. The battalion then may use a little less than seven hours of the remaining 20 to produce its OPORD, with similar time breaks for the company, platoon, and even squad. This one-third, two-thirds rule is known throughout the Army as the standard by which the preparation of orders is measured. This standard is not tough enough, though, and in most cases leaders at company level and below end up with less time than they need to plan adequately for their operations.

In the 3d Brigade, 4th Infantry Division, operations over the past 18 months or so have indicated that a tougher standard of one-fifth, four-fifths is in order. This tougher standard is aimed primarily at the brigade and the battalion or task force levels. And our experience during a REFORGER

deployment, a rotation to the National Training Center (NTC), a three-week off-post deployment to a maneuver site, and numerous local Fort Carson exercises indicates that it can be met at those levels and at some lower levels as well.

If the brigade meets this tougher standard, a battalion's planning time is increased by at least 21 percent. This extra time benefits the task force elements even if they follow the old standard. But if the battalion can also conform to the one-fifth, four-fifths rule, the company commanders are the major benefactors, as their planning time increases almost 45 percent (see table). This rule may be too stringent to be used at the company level, but if the higher echelons follow it, a company still gains considerable planning time.

	1/3-2/3 RULE		1/5-4/5 RULE	
	Time Available	Time Used	Time Available	Time Used
Bde	100	33	100	20
Bn/TF	66	22	80	16
Co	45	15	64	12-13
Plt	30		51	

But how does a brigade or battalion staff officer go about reducing the total time he needs to prepare orders? The four major methods discussed below permit this to happen. One involves the quality of the desired product and how to make the most of the resulting order. The second method makes it possible to display much useful information rapidly and concisely. The third method involves producing, reproducing, and issuing the order, and the fourth suggests some improved coordination procedures.

In most planners, there is an ingrained desire to produce the "A+ plan," the "school solution," or the "perfect plan." A highly detailed staff estimate, a carefully selected course of action, a thorough analysis of enemy avenues and actions, and a totally comprehensive wargaming resolution will usually result in such a plan. Unfortunately, performing these tasks completely and by the book just eats up too much time! The "perfect plan" can be written, but if a staff produces one con-

sistently, that plan may be available for issue only to the enemy who overruns the unit's tactical operations center.

General George S. Patton, Jr., is credited with saying, "A good plan today is better than a perfect plan tomorrow," and it is to this idea that this first methodology is directed. An "A+ plan" delivered late, not fully coordinated, and inadequately executed will often fail. On the other hand, a good, solid, tactically correct "B plan" that is issued early enough to allow for complete coordination and capable execution has a greater chance of succeeding.

The crunch usually comes at the company commander level; it is he who eventually controls troop movements, executes cross-attachments, and directs the firepower that kills the enemy. No matter how talented he may be, he will do *better* if he has more time. And the more lead time he has the better the outcome will tend to be.

The one component that can assure the successful implementation of a good plan are the "Commander's Intent" paragraphs. These paragraphs are as important as all the concept statements, fire support plans, and specific instructions combined. In this brigade, we habitually include our higher echelon commander's intent as part of the "Friendly Forces (Higher)" of our paragraph 1 (Situation). By providing "higher's" intent along with a clear-cut statement of the brigade commander's intent, we have found that our subordinate leaders have a much clearer concept of the overall picture and of how their battalion or task force's actions fit into the total scheme.

When subordinate commanders also follow this procedure, the result is squad leaders and tank commanders who can carry out their commander's intent even though they may not be able to communicate with an officer-leader. (The informed NCO has always been a strong point of our Army; with this methodology he can be even moreso.)

Our experience at the NTC and other major deployments has indicated that successful operations can be conducted with clear useful graphics, an execution matrix, and the commander's intent alone! Although this is certainly not the goal of operations personnel, it does point out the importance of this sub-paragraph. At any level, a clear understanding of the boss's desires often outweighs the mass of specific and coordinating instructions that normally accompany an order.

Another way of getting a field order out fast involves modifying the way information is presented to subordinate units. A traditional brigade order includes a long list of annexes to support the basic order, with intelligence, fire support, Army aviation and others having their own individual annexes or appendixes. The current manuals describe what should and should not be included in these enclosures and clearly defines the acceptable format. Thus, a "school solution" fire support annex will always include a sub-paragraph on naval gunfire even if the unit is maneuvering at Fort Irwin—with a nicely worded "None" or "Not Available" next to it. These formats, strictly used, make the order correct, but long, ungainly, and difficult to digest.

The concept of the mission or execution matrix, as described in Chapter 4 of FM 71-2J, The Tank and Mechanized Infantry Battalion/Task Force, was a beginning, and most units have

developed a matrix of their own for offensive operations. From there, it was only a small step to the combat team matrices this brigade has developed.

These matrices do a number of important things. First, they combine like systems or related systems into a single annex or matrix. Thus, for example, one single matrix includes the information normally contained in the fire support annex, the Army aviation annex, and the close air support paragraph. This information is put on a single page, if possible, to permit commanders and staffs to see it all at one glance. Because the matrix makes the important data easy to find and eliminates some of the "None/Not Available" comments, it is much more functional and useful. No longer will a tired, bleary-eyed staff officer miss his assets on page 6 of a 10-page annex.

Several of the matrices developed for use in this brigade are shown here, but as examples only—other units can modify them to meet their own specific needs.

### Air Defense

The air defense matrix provides battalion-level air defense elements with all the information they need to perform their mission and to pass orders to their subordinate elements (see Figure 1). The units to which ADA assets are assigned are shown across the top of the matrix, while the actual assets and information data are along the left side.

The first section lists the ADA weapons that are present in the brigade and the elements that are task organized to units. The unit designation and the number of operational systems

	BDE CONTROL	1-8 M	2-34 AR	4-40 AR
STINGER	NONE	1/4/C (DS)	4/4/C (DS)	2/4/C (DS)
VULCAN	NONE	3/A (DS) 3	NONE	3/B (DS) 4
CHAPARRAL	3/C (GS) 4	EN 873187 1	EN 982188 1	EN 901100 1
ADJ SECTOR	RIGHT (NORTH) A/4-61	LEFT (SOUTH) B/8-61	FORWARD ( ) NONE	REAR (RESERVE) B/4-61
FAAR	CURRENT: EN 665185 EN 704111	PROJECTED: EN 884192 EN 863175	PROJECTED: NONE	
ADW/WCS	YELLOW/HOLD UNTIL UPGRADED BY III CORPS OR CADC IN SECTOR			
ACO	LLTR1 EN 605888 - 777931 - 994186 - UNTIL 241830 WPN FREE ZONE: VIC CITY OF TRINIDAD			
CLV ATP	STINGER: EN 776915	VULCAN: EN 776915	CHAPARRAL: NONE	
SPECIAL INSTRUCTIONS	1. VULCAN RADARS WILL NOT OPERATE UNTIL H-4 HRS. 2. ENEMY AIR EXPECTED TO BE MI-24, Su-17, Su-25. 3. LINKUP POINT FOR VULCANS EN 863100, 231900Z.			

Figure 1. ADA Matrix. (Prepared by Lieutenant Willie Merrick, brigade Air Defense liaison officer.)

appear beneath the appropriate task force. The support relationship (DS, GS) is also shown as well as the grid coordinates of any brigade general support system located within a task force sector, with the number of weapons positioned there located by grid.



	TF 2-34	TF 1-10	TF 1-8	BDE
Task Organization	1/C/4 EN (DS) 1/C/299 EN EQUIP/C/4 EN AVLB/C/4 EN	2/C/4 EN (DS) 2/C/299 EN EQUIP/C/299 EN (-) AVLB/C/4 EN	3/C/4 EN (DS) 3/C/299 EN AVLB/C/4 EN 2 CEV/C/4 EN	C/4 EN (-) C/299 EN (-)
Priority of Engr Effort	S, C-M, M	S, C-M, M	S, C-M, M on order M, C-M, S	S, C-M, M
Priority of Engr Support	1	2	3 on order 1	NONE
Planned FASCAM	4	2	0	1
Engr Equipment	2 Dozers 2 Loaders 1 Backhoe	1 Dozer 1 Loader 1 Backhoe	1 Dozer (299) 1 Loader (299)	NONE
Class IV & V (Appendix 1) WTC MFR EMFB	Bde Tgts TF 4 16 4 16	10 10	5 5 8	NONE
Directed Obst. (Appendix 2)	3001 3002	NONE	NONE	NONE
TF Engr	Cdr, C/4 EN	Cdr, C/299 EN	Plt Ldr, 3/C/4 EN	N/A
S = Survivability C-M = Countermobility M = Mobility WTC = Wire, triple standard concertina (300m) MFR = Mine field row (300m) EMFB = Explosive minefield breach (150m)				

**Figure 2. Engineer Matrix. (Prepared by Captain Bob Slockbower, brigade engineer.)**

Adjacent ADA units are listed in the second section followed by current and projected forward area alerting radar (FAAR) locations. The air defense warning and weapons control status, with any restrictions or modifications, is then described, and airspace control orders are listed next. These might include low-level transit routes, minimum risk routes, high density airspace control zones, or weapons free zones with appropriate location data. Class V ammunition transfer points are then listed, if they are known.

This matrix can be further expanded, or used in conjunction with an overlay, if necessary. Specific instructions may be included to describe non-standard data or to assist units in their missions. This section might also be used to describe on-order missions.

### Engineer

The engineer matrix provides a rapid way of organizing the critical information necessary for directing the engineer activities performed in support of brigade combat team operations. The matrix reduces or eliminates the need for preparing the traditional narrative engineer annex.

In the basic engineer matrix (see Figure 2), the task forces and elements under brigade control are listed across one axis and on the other are the specific elements of information needed to define engineer-related mission requirements. The items included in the matrix are tailored to the specific mission requirements of the basic order. The determination of these is a critical step that must be performed by the brigade engineer in conjunction with the combat team staff.

In the sample matrix, the essential items were determined to be the engineer task organization, priority of engineer effort, priority of engineer support, number of planned FASCAMs (family of scatterable mines), engineer equipment, engineer-related Class IV and V requirements, directed engineer obstacles, and task force engineer command and control. For those items that require more specific coordinating instructions, appendixes to the basic engineer matrix can be prepared to provide the necessary details. These are also prepared in matrix form.

The engineer task organization includes the specific allocation of engineer platoons, combat engineer vehicles (CEVs),

and armored vehicular launched bridges (AVLBs); and the priority of engineer effort in the performance of the basic engineer missions of mobility, survivability, and counter-mobility are delineated for each task force. It is not unusual for the priority of engineer effort to differ among the various task force engineer support elements. The priority of engineer support for each task force is annotated by consecutive numbers, with 1 indicating the highest priority.

The brigade engineer matrix can be modified to suit specific mission requirements, including hasty and deliberate river crossing operations. These brigade level matrices also form the basis for preparing detailed execution matrices by the task force engineers.

### NBC

The NBC matrix (see Figure 3) is designed to provide essential information on chemical or nuclear support in a convenient, quick-reference format. Units are arrayed across the top, with informational data displayed on the left side.

Mission-oriented protective posture (MOPP) is the first item listed. Since MOPP is not a fixed or rigid system, flexibility is the key to providing maximum protection with the lowest risk possible for a given mission. Flexibility allows the subor-

	BDE CBT TM	1-8 IN(M)	2-34 AR	4-40 AR
1. MOPP LEVEL/ TIME	I 040600	II 040600	II 040600	I 040600
2. OEG/ TROOP SAFETY	NEG RISK TO UNWARNED EXPOSED PERS	MOD RISK TO WARNED PROTECTED PERS	MOD RISK TO WARNED PROTECTED PERS	NEG RISK TO UNWARNED EXPOSED PERS
3. OECON -CP -UNIT -CM -RELATIONSHIP -L/U SITE -LOCATION	EN 122777 3/31st CM Co GS	CP2 CP7	CP6 CP17	CP19 CP26
4. SMOKE UNIT/RELATION TIMES  GEN/FOGOIL L.U.PT	NONE	2/172CM(SG) (DS) From 040600 to 041800 12/2400 gal CP 2	NONE	2/172CM(SG)(DS) From 041800 to 051200 12/1200 gal CP 19
5. NBC PECON -DTG COMPLETE -LOCATION -DLB -RLB	NONE	021800 PT ZEBRA 10 CGY 5 CGY/HR	021800 PT CALF 10 CGY 5 CGY/HR	NONE
REMARKS: (1) Winds Expect S-SW, 10KKT from 031800-041000 (2) Enemy has used VX in adjacent bde sector				

**Figure 3. NBC Matrix. (Prepared by Captain Greg Schlechta, brigade NBC officer.)**

dinate commanders to adjust the amount of MOPP protection required in their particular situation and still maintain combat effectiveness. Directed MOPP levels are prescribed in the matrix. Subordinate commanders may exceed these levels without approval but must request any lower level or any reduction in MOPP.

Operational exposure guidance (OEG), described next, is determined on the basis of the unit's previous exposure and the risk that the commander is prepared to take. OEG may differ between task forces. Decontamination assets are discussed next with unit designation, location, and command relationship shown.

Smoke assets are listed in a similar manner with command relationships described and the number of operational generators and gallons of fog oil on hand. Any NBC reconnaissance missions tasked by brigade are also listed with

[illegible]

**Figure 4. NAI Tasking Matrix. (Prepared by Captain Gus Greene, brigade S-2.)**

NAI

The S-2's responsibility before the battle is to conduct an intelligence preparation of the battlefield. (It is important to note that not one field manual explains in sufficient detail how the collection taskings are made at brigade and battalion levels.)

annex was mostly ignored by staffs and commanders. Then, when an intelligence annex was written with real “meat” in it, out of habit, it too was often disregarded.

The fact remains, however, that the intelligence annex did not tie the collection requirements to a tasking requirement. The NAI tasking matrix does this. It is simply a collection plan used to task the commanders of subordinate units with the surveillance of specific areas on the ground where the commander must make a decision or react as planned. Each NAI must be chosen carefully since the collection resources within a brigade are limited.

Brigade assets include combat observation and laser teams (COLT) from the direct support artillery battalion, aviation units, ground surveillance radars (if under brigade control), and tasked assets from higher headquarters. As is usually the case, the assets are always outnumbered by the information required, and it is unreasonable to task a battalion with more than five brigade-directed NAIs, as more would deplete all battalion assets and prevent a unit from designating and surveying its own NAIs. As a result, NAIs have to be assigned a priority based on their importance to the outcome of the battle. This priority is required not only because of the limited assets but also to account for combat losses that will change the number of assets available.

The matrix displays tasked agencies (all units, not just "line" battalions) across the top and numbered brigade priority NAIs down the left side. Specific information desired is on



The NAI tasking matrix, when used with the enemy situation paragraph and the decision support template, has become an effective replacement for the intelligence annex to an operations order by translating the commander's PIR/IR into specific intelligence requirements tied to a piece of terrain where activities are expected to occur.

A combination operations overlay and a simplified five-paragraph operation order, for instance, can be reproduced simultaneously. A standard operations graphic, produced on an acetate master, is the basis for the basic order. Written alongside the graphics are the essential paragraphs of the



TOC for two hours awaiting the arrival of unit liaison officers defeats the entire purpose. Two simple options ensure that the "fast field order" can now be delivered quickly. If helicopters are available (probably only at brigade level) and the enemy situation will permit it, orders may be flown forward to unit command groups, TOCs, or TACs by a "battle captain" who can explain the order.

A more reliable, though less timely, method is to rely on unit liaison officers and NCOs (LNOs). These LNOs are called to the TOC when the orders group convenes so that they will be there before the order is complete. LNOs are briefed on the order by the battle captains or staff officers and questioned in an informal "briefback" before it is released. Questions are cleared up, and the LNOs then return to their units to deliver and explain the order.

It is easy to see how a "good plan" prepared according to the one-fifth, four-fifths rule can be more effectively coordinated. But no plan can succeed if the efforts of every element are not coordinated, or if the subordinate units are not given the time they need to properly execute the plan.

If the plan follows the rule described above, however, unit staffs will have additional time to coordinate their efforts. Whether at brigade or battalion level, staffs with more coordination time generally produce better products. A staff officer can begin his coordination, of course, before the order is begun by his headquarters with some general guidance—"We think we are going to . . ." and "One plan puts you here while the other places you over there." But this type of coordination frequently causes more problems than it solves when people misunderstand.

If the "good plan" is produced quickly, it then permits the staff to focus cleanly on final coordination and enables them to nail down the details. This also permits the staff to discover potentially serious problems early enough to correct them instead of trying to just work around them. Aggressive staff members will hunt down their subordinate counterparts and make use of the valuable time this tougher time standard has made available to them.

Since the OPORD is a living document, it usually requires change or modification as more combat information becomes available. Intelligence data, in particular, can cause a plan to be modified or even changed completely before its final execution.

The "fast-good order" is easier to modify, for several reasons. Because there has been no attempt to make the order "perfect," the writers and staff members tend to accept modifications to it with less resistance. On the other hand, planners who have sunk lots of time and professional "face" into a product tend to be overpowered by the specific details of their plan.

The quicker plan also gives brigade and battalion level staff officers and NCOs the time and opportunity for face-to-face coordination with their subordinate counterparts or with combat support or service support leaders. This enables them to focus on potential trouble areas and identify them early. Their on-the-spot influence may solve a problem, or at least elevate it to the level where it can be solved more expeditiously. Although the upcoming battle cannot be won through the coor-

dination efforts of these staff members only, their presence, influence, and problem-solving abilities may prevent defeat.

An extremely useful tool for staffs to use in this quest is the "War Stoppers" list. After the order has been issued and staff officers and NCOs are effecting their coordination, the executive officer and assistant S-3, with the commander and the S-3 if they are not forward, sit down and study the plan. They look at all the coordination that must be done and select key items that will severely affect the mission if they are not completed—that is, "war-stoppers." These critical items are then listed on a board where they can be seen easily.

The format of this board is up to the individual, but it is useful to group the issues by functional areas—artillery, close air support, engineer, air defense artillery, and logistics. The XO and the battle captain then decide where they will expend their personal efforts in resolving these issues. The XO may elect to include the command sergeant major or other members of the staff to pursue specific coordination issues. When the commander and the S-3 return, if they do, they may also add their concerted efforts in these areas.

As each war stopper is resolved, this is annotated on the list so that the battle captain will know the status and be able to double check during his tour of duty in the TOC. Before the commander, the XO, and the S-3 retire to rest, they go over the war stoppers list one last time. Any additions are made and the battle captain is advised on what coordination measures must be taken. If the status of any of these significant items should change, the battle captain is directed to inform the command group immediately.

The importance placed on this list helps to ensure that key coordination items will not be overlooked or forgotten in the usual TOC's intense environment. The additional coordination time made available by the faster planning process and the systematic approach to critical coordination tasks permit brigade and battalion staffs to make the most of their staff efforts. The writers of the order must understand that coordination issues must be initiated by the time the order is written but not necessarily completely resolved. It is a bit uncomfortable the first time the members of an orders group work in this manner, but the additional time they are given to complete detailed coordination items pays impressive dividends.

The "fast field order" is not a complete solution to all the problems of writing and producing good orders in the field. But neither is it a half-hearted staff officer's excuse for not being able to produce orders "by the book." It is a methodology that will permit commanders and their staffs to produce effective orders in a timely manner, thereby giving their subordinates time to do the same thing.

Following the techniques described here in itself will not guarantee success, but when followed consistently these techniques will increase the opportunity for success at all command levels.

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Major James A. Dunn, Jr., an Armor officer, was S-3 of the 3d Brigade, 4th Infantry Division when these procedures were developed. He previously served as S-3 of an armor brigade and an armor battalion and as an assistant professor of geography at the U.S. Military Academy and is now assigned to a defense attaché office. He has had several other articles published in various military journals.

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# Infantry

## In Action



## CROSSING THE MEURTHE

E. A. REITAN

*AUTHOR'S NOTE: On 15 August 1944 the United States Seventh Army landed in southern France, moved quickly westward to take Marseilles, and then swept north up the Rhone Valley, reaching the Vosges Mountains by mid-October. At this point the attack stalled; German resistance stiffened, supply problems became acute, and the rugged terrain proved hard going for battle weary troops.*

*I was briefly part of this story. I joined Company F, 2d Battalion, 7th Infantry Regiment, 3d Infantry Division as a replacement rifleman on the Anzio beachhead. I got my baptism of fire during the Anzio breakout, enjoyed our triumphant entry into Rome, stood guard at Mussolini's headquarters on the Piazza Venezia, participated in six weeks of strenuous train-*

*ing for the landing in southern France, and landed with the first wave at Cavalaire.*

*Although the landing did not compare in casualties with Salerno or Normandy, the 7th Infantry had 58 men killed, including 11 from Company F. I got mine the next day when I was wounded in the knee and sent back to a hospital in Naples. Thus I missed out on the fabled "Champagne Campaign." In October the doctors decided, in view of the great shortage of riflemen, that I was sufficiently recovered to return to combat. I rejoined my unit in mid-November, just as the Seventh Army was preparing for its push toward Strasbourg and the Rhine.*

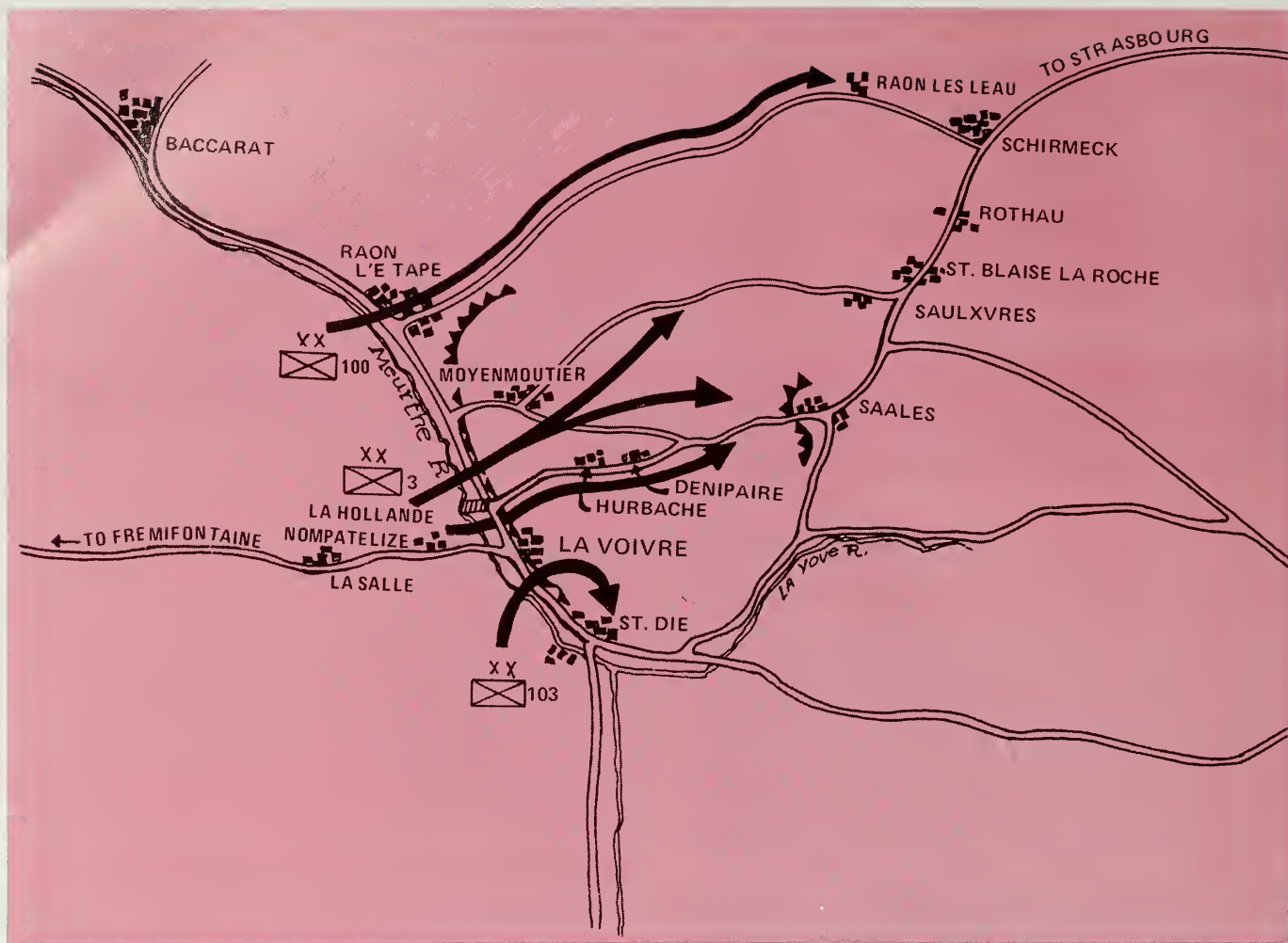
The Army's immediate objective was to break through the "Winter Line" that the Germans had spent several months preparing in the Vosges Mountains (see Map 1). The 3d Division's assignment was to cross the Meurthe River above St. Die and then cut through the mountains to Saales, where it would be on the main road to Strasbourg. To the north, the 100th Division would attack from Raon L'Etape, while to the south the 103d Division would take St. Die itself.

Nestled in the valley of the Meurthe, St. Die was a tough obstacle similar to St. Lo in Normandy. The most likely strategy was to outflank it, and for this reason the Germans had built extensive fortifications north of the city along the river. The Meurthe is not a large river but it flows rapidly down the valley, and in November it was swollen by autumn rains. The riverbanks were soft and muddy. Just north of St. Die at LaVoivre, however, there were two good sites for the Bailey bridges that would be needed to move the Division's armor and other heavy equipment across the river.

The Division decided that the most dangerous part of the coming operation would be the actual crossing of the swift-

flowing Meurthe. The German fortifications were weakly manned, and once our infantry got across the river they could be taken by assault. The land west of the river, though, was bowl-shaped: a flat plain surrounded by mountains, over which the Germans had excellent observation, and in the days before the attack, the Germans used this advantage to shell the Division's crossing area. A daylight attack would certainly come under heavy artillery fire, especially at the vulnerable time when the troops were crossing the river. For this reason the Division decided to cross the river at night, attacking at dawn after heavy artillery preparation. Company F had had a brief respite from combat, the time being used for training, repairing equipment, and practicing night maneuvers and river crossings. The date for the crossing of the Meurthe was set as 20 November.

LaVoivre and the bridge sites were assigned to the 2d Battalion commanded by Lieutenant Colonel Clayton Thobro, one of the most respected battlefield commanders in the division. LaVoivre was a village of about twenty houses, one and one-half miles north of St. Die, which had been converted by the



Map 1

Germans into a strongpoint. It was situated on rising ground about 1,000 yards from the river. The plain between the river and the town had been mined, and the rising ground in front of the village was blocked by felled trees, barbed wire, and trenches. The hills and woods behind the town provided ideal locations for the German artillery units, who were zeroed in on the riverbanks where we were likely to cross.

The houses of LaVoivre had been converted into fortifications, with buildings connected either by breaches in the walls or by underground tunnels. Because the buildings were sited on a slope, their basement walls were open on the side facing the river, from which connections were made with trenches. Isolated houses on each end of town had been reinforced by sand-bagged windows. If LaVoivre had been adequately manned, it would have been a tough nut to crack. Fortunately, Division intelligence had learned that LaVoivre was defended only by approximately 60 men. There was no German armor that might counterattack.

When the attack began, the 7th Infantry was bivouacked at Fremifontaine, about 15 miles from the crossing point. At 2300 on a chilly, damp evening, the 2d Battalion left Fremifontaine by truck but encountered a traffic jam when a battalion of tanks from the 14th Armored Division wandered into 3d Division

territory. The delay was short, but the tanks chewed up most of our telephone wire.

We left the trucks at LaSalle, about a mile from the river, going the rest of the distance by foot. We were under strict orders to maintain complete silence, an order we scrupulously obeyed, since no one wanted to draw enemy fire. Our 1st Battalion moved into position on our left about the same time. The 3d Battalion was in reserve, ready to move through the assault battalions when the initial objectives were achieved.

Earlier in the evening, Company F's third platoon had gone ahead, crossed the river in wooden boats, and established a perimeter on the east side of the river, and the combat engineers installed two footbridges downstream from the planned Bailey bridge sites. These were standard floating bridges with a three-foot gangway and attached cables for hand guides. One was 84 feet long and the other 96 feet. Fortunately, the Germans were unaware of the bridge building, and their random artillery fire during the night was apparently routine harassing fire.

At 0345, Company F, commanded by First Lieutenant Earl Swanson, led the battalion across the footbridges (see Map 2). (I still remember the blackened faces of the engineers as we crossed the bridge.) We spread out quietly on ground that



I recall as hard, damp, and cold. There was no thought of digging in, which would have made noise. Company E, under Lieutenant James Powell, followed and took its place to the right of Company F. Lieutenant Leonard Hanney's Company G remained in reserve back by the river in a line of trees. It was in a column of platoons parallel to the river with orders to make a large loop to the south end of the town. Sections of Company H, the battalion's heavy weapons company, were attached to the three rifle companies. The 1st Battalion crossed on footbridges to our left, and farther north two battalions of the 30th Infantry also crossed.

Once in place, we lay for two hours in the silent darkness. All was quiet until about 0600 when the German artillery routinely shelled the riverbanks and hit several men in Company G; I do not recall that any of the wounded cried out.

An important part of the plan was a massive artillery barrage to precede our infantry attack. The firepower devoted to this rather modest operation was indeed awesome. The official history of the Seventh Army summarizes it this way:

*H-Hour was preceded by 30 minutes of the most intense artillery preparation fired for the 3d Division since the breakout at Anzio. This was followed by 30 minutes of counter-battery and deepening fires on enemy positions. The initial preparation was fired on the enemy's main line of resistance, from which infantry elements were but 200 yards away . . . Over 6,500 rounds were fired by 3d Infantry Division Artillery alone, in addition to that fired by corps and group. In support of the VI Corps assault across the Meurthe 64 sorties were flown by the XII Tactical Air Corps prior to noon.*

Our Regimental Cannon Company also provided indirect fire while direct fire was provided by antitank guns, tanks and tank destroyers from hull-down positions, and anti-aircraft guns. The Division's Reconnaissance Troop manned six .50 caliber machineguns and the 7th Infantry's Battle Patrol

manned 20, all of which were mounted along the riverbank to provide overhead direct fire support for the advancing infantry.

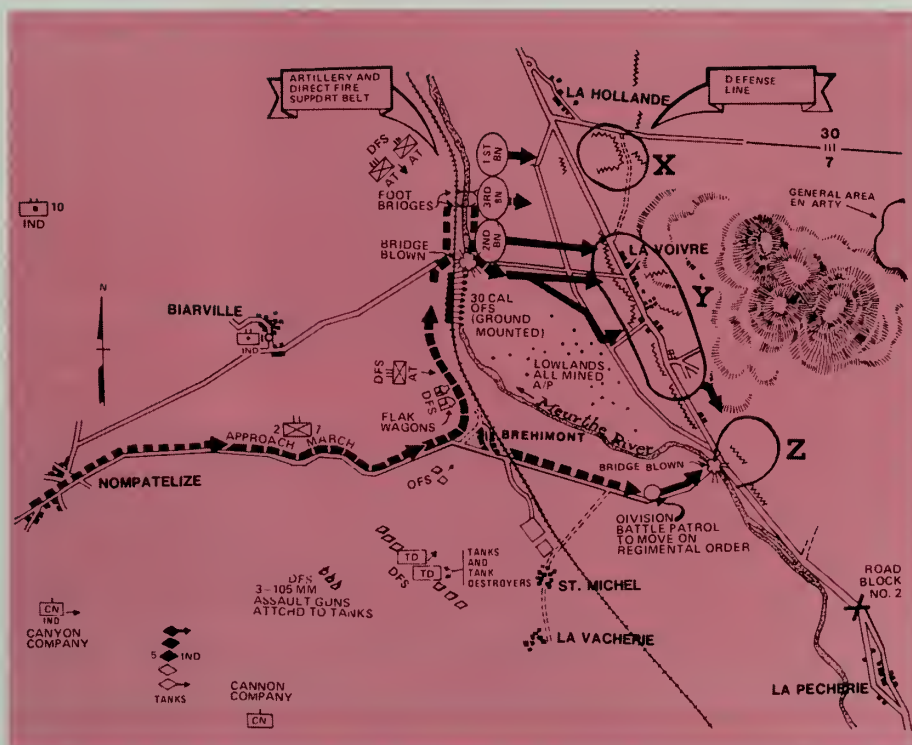
At 0617 the barrage began. It alerted the Germans, who assumed that the river was being crossed at that time. They placed mortar fire on the riverbanks and plain and we could do nothing but lie there and take it. Seven men in the company were hit. One mortar shell landed about three feet behind my right foot. It seemed like the ground dropped out from under me and I fell back on my stomach with a thud. I can still see that smoking black hole.

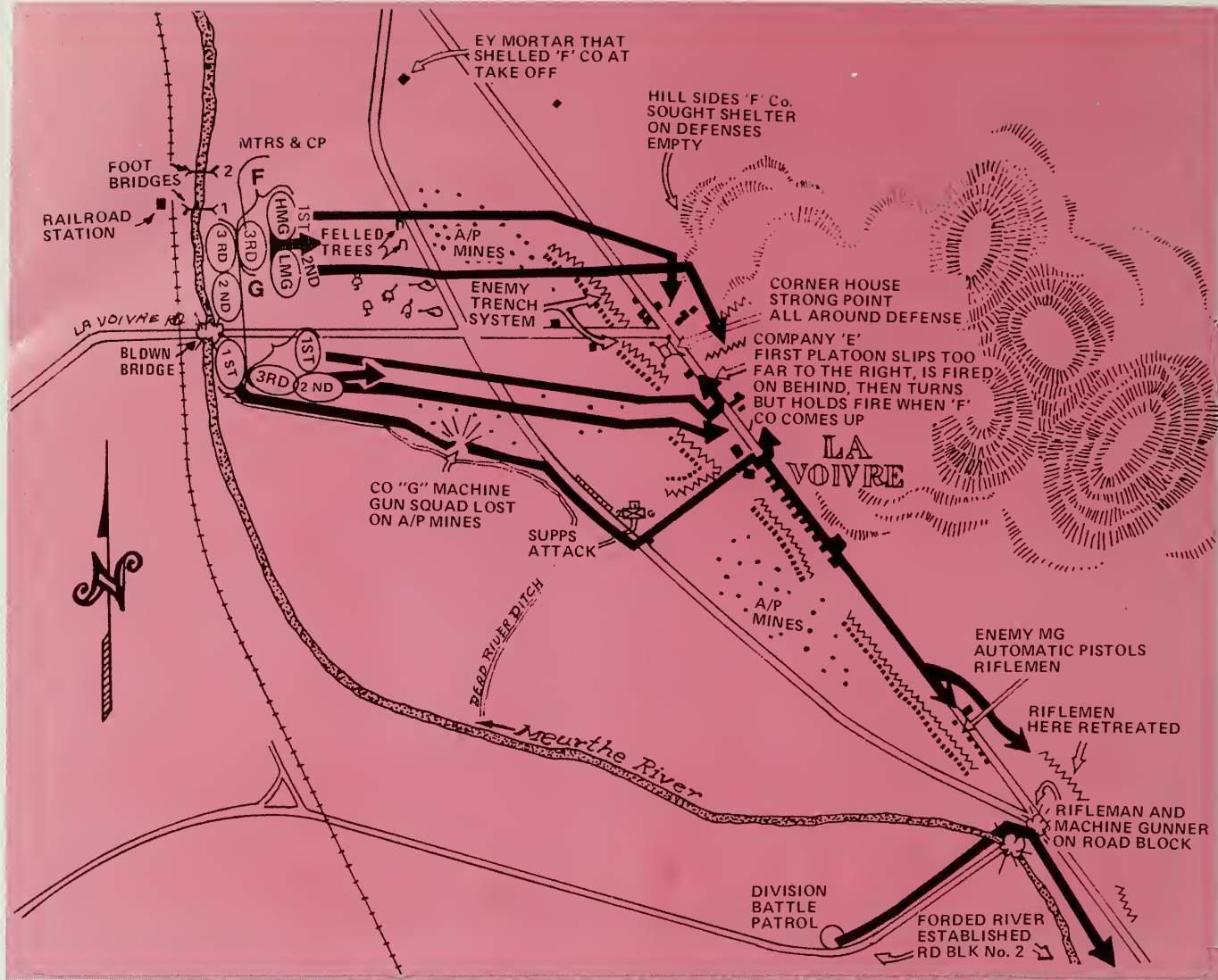
Despite the shelling, we held our places and maintained silence. Nobody panicked. Besides, there was no place to go.

The battalion jumped off at 0645 (see Map 3). By that time LaVoivre was burning and a cloud of smoke from it rose in the pale November dawn. Our artillery was still firing overhead and the direct fire weapons poured fire on the town. One report attributed the German's failure to occupy their trenches to the volume of direct fire support. In the meantime, dive bombers attacked the German artillery positions in the rear, thus preventing German counterfire while the advance was in progress. I still have a vivid memory of a dive bomber swooping down on the town and dropping its bomb, which at that distance looked to me about the size of a jelly bean.

Our advance was delayed about half an hour by felled trees, and this gave the Germans time to get out of their cellars and pour machinegun fire on us. Most of it came from a fortified house on the north end of town. We needed another half-hour to reach the wire and the trenches, which fortunately were unmanned. The company then took shelter on the hillside north of town while Lieutenant Swanson directed the First Platoon to attack the house; he later estimated it contained 10 men with a heavy machinegun and other automatic weapons. The Second Platoon (where I was) swung around in back of the town

Map 2





Map 3

and then began working its way down the street, clearing houses.

In the meantime, on our right, Company E did not encounter the obstacles that slowed our advance, and its soldiers attacked the town in quick rushes, reaching the wire and trenches in about 15 minutes. The leader of Company E's First Platoon was new to combat, and many of his men were new replacements. The platoon was supposed to link up with Company F, which was still working its way through the felled trees and receiving fire from the fortified house at the north end of town.

Company E did not receive any fire from this house until its First Platoon veered southward to the main part of town. Then the Germans in the house opened up on them. The platoon scattered for cover until Lieutenant Powell, the company commander, got it organized and firing back. The platoon stopped firing when they saw our First Platoon attack the house. The rest of Company E stayed busy clearing houses and taking prisoners.

Company G attacked by looping to the right, its purpose being to take the road that led southward to St. Die. It ran into a minefield and lost an entire machinegun squad from Company H, plus several of its own soldiers. But then it ad-

vanced rapidly and reached the south end of town about 0730 and probably took most of the prisoners the battalion claimed that morning.

A secondary objective of the battalion's attack was the site of a blown bridge south of town. Here the Germans had a roadblock composed of a squad of men with a machinegun and automatic pistols. The Division's Battle Patrol forded the river at this point about 0830 and attacked the roadblock with support from Company G. Eight or ten prisoners were taken, and other German defenders fled into the hills. German artillery and mortar fire fell on the road, however, and cost Company G an estimated 16 casualties. The bridge site was secured about 1045 and the engineers immediately began installing a Bailey bridge for the armor to cross and continue the Division's advance. By that time, too, other engineers were already building another bridge at the site near the footbridges.

By 1100 the battle was over. The 1st Battalion took the village of Hurbache and the 3d Battalion was committed, crossing on the footbridges and taking Denipaire (see Map 1). We were sent back to catch our breath and reorganize. The 7th Infantry Regiment had 167 casualties that day, including 31 killed and 136 wounded. The 2d Battalion had 11 killed (three from Company F) and 57 wounded. It captured 45 prisoners.



When we dug in for the night, I opened my pack to take out my blanket. I found it was full of holes. My first reaction was: "Somebody took my blanket and gave me this moth-eaten one." Then I looked again and saw that a piece of shrapnel had passed completely through the pack and blanket about two inches above my back. Obviously, this was from the mortar shell that had blown me off the ground in the early morning shelling.

What can we learn about infantry combat in World War II from this account of the crossing of the Meurthe? An official report prepared by the Seventh Army historical team, which I have used to flesh out my own recollections, shows the extensive planning and coordination that was necessary to launch an attack by one battalion on one small village, an attack completed in less than four hours. Most of the men who planned and led the operation were ordinary Americans with minimal training who had learned how to do it mainly through experience. Common soldiers like me had little knowledge of what was happening, but we did our duty anyway. The 7th Infantry relied on heavy supporting fire to destroy the enemy's willingness to resist and then sent in rifle companies to occupy the ground, mop up any remaining resistance, and take prisoners. The Germans in LaVoivre put up a respectable fight and then surrendered or fled. By the time the riflemen got into the town, most of the enemy were gone or were ready to surrender. As a rifleman, that's the way I liked it!

Crossing a river at night was unusual and required careful planning, good leadership, and well-disciplined troops. In this respect, the 7th Infantry performed well. The risk in the plan was premature discovery, for when the two battalions had crossed the river and taken up their jump-off positions, they were vulnerable to German artillery and mortar fire. In the darkness, they could neither attack the town nor retreat across the river. The gamble paid off, but the 2d Battalion paid a price, the least of which was my ruined blanket. We were fortunate the price was not higher.

The crossing of the Meurthe established a method of crossing rivers at night that was used successfully by the 3d Division on several occasions during the Colmar Pocket operation. Clearly, the Division was capable of organizing and carrying out a sophisticated and risky operation.

At LaVoivre, as is inevitable in a citizen army, leadership determined what happened. The rifle companies were greatly understrength, and the constant turnover of riflemen meant lack of battle experience and inevitable confusion. The company commanders were proven leaders, and with companies

at half strength or less they exercised considerable personal control over the action. Sometimes the lack of experience may have been an asset.

What about the riflemen? In 1947, S.L.A. Marshall's *Men Against Fire* astonished a nation whose view of World War II had been shaped by wartime newsreels, movies, and morale-building articles, plus the tales of personal daring and danger told by returning veterans. The theme of Marshall's book was the lack of aggressiveness on the part of U.S. ground troops, which he demonstrated by showing the unwillingness of riflemen to fire their rifles.

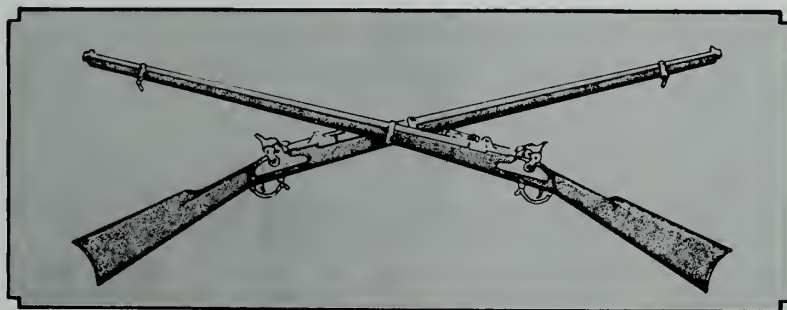
After surveying numerous battles in the European Theatre and in the Pacific, Marshall found that in any battle no more than 25 percent of the riflemen fired their rifles, and much of the time the figure was closer to 15 percent. I know I did not fire my rifle at LaVoivre, and I am confident that most members of the Second Platoon did not, although other platoons did. Coming around the back of the town, firing by the Second Platoon was more likely to injure friend than foe.

The crossing of the Meurthe showed that the riflemen would fire their rifles where there was a target and when their officers or NCOs showed the way. There are enough deadly missiles flying around a battlefield anyway without adding unnecessarily to the congestion. The purpose of infantry is to advance on the enemy and occupy ground. When this purpose is carried out, the riflemen are fighting the war, whether they fire their rifles or not.

In retrospect, the crossing of the Meurthe River, although it had some special features, was the kind of small unit action that took place constantly in combat and would be repeated over and over until Hitler's *Reich* was no more. All along the great front that stretched from the North Sea to the Alps, other battalions were doing approximately the same thing. Although it is important to understand war in its broadest context, if there is any lesson for the modern U.S. Army in this account of the crossing of the Meurthe, it is that war eventually comes down to small unit actions. It is at that level that doctrine, training, leadership, weapons, and morale prove their worth.



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## Counterreconnaissance

MAJOR DAVID J. OZOLEK

The Soviets' doctrine calls for extensive reconnaissance operations at every level of command. Their tactical philosophy of top-down, centrally controlled planning requires that each commander have accurate, detailed knowledge of the enemy's dispositions and capabilities. Since their success depends upon having all elements of their well-ordered tactical machine work according to a precise, relatively inflexible timetable, surprises can mean disaster. If a unit's critical operational timetable is disrupted, Soviet shortcomings in command and control do not allow for speedy reaction to unanticipated threats.

The dependence on extensive and successful reconnaissance is an important Soviet vulnerability that the U.S. Army must train to exploit. But many of our heavy task forces that conduct exercises at the National Training Center against the NTC's experienced and relentless Soviet-style opposing force (OPFOR) have not been able to prevent the OPFOR reconnaissance effort from gathering the information necessary for successful OPFOR operations. The key to denying the OPFOR (or a Soviet) commander that information is an aggressive counterreconnaissance plan that focuses all available assets on destroying the OPFOR's reconnaissance effort before it can be used effectively. (See also Major Ozolek's "Reconnaissance Planning: A Neglected Art," INFAN-

TRY, March-April 1986, pp. 27-31.)

Counterreconnaissance must be more than merely an item on an S-2's checklist or reliance on such routine, passive measures as camouflage and the use of hide positions. It must be an offensive attitude that is instilled in every squad, crew, and section member — a comprehensive effort painstakingly planned and executed through every phase of the operation. Even the best tactical plan is jeopardized if the enemy, through his reconnaissance efforts, can determine the plan's concept and its strengths and weaknesses.

### DEFAULT

Although the best defense against enemy reconnaissance is a good offense, the NTC's OPFOR has routinely won the reconnaissance battle through default. Because the U.S. forces do not habitually implement an aggressive patrolling plan of their own, the OPFOR has had both the uncontested freedom to operate and the luxury of uncommitted forces with which to conduct extensive reconnaissance. They are therefore able to gain the psychological initiative early in the training cycle by making it appear that OPFOR patrols are operating everywhere.

This aggressive OPFOR presence

causes many of our task force commanders to react defensively and pull their infantry assets in to protect their force. By doing so, they reduce their own offensive patrolling capability and limit the effectiveness of their subsequent operations. This is exactly the reaction the OPFOR commander hopes for, because it decreases the pressure on his infantry to provide security and allows him to maintain the initiative in the operations that follow.

The U.S. commander, instead of pulling his infantry in, should strike back at the OPFOR early and hard. Raids, spoiling attacks, and reconnaissance by fire against OPFOR security or main force elements will get the OPFOR commander's attention and make him seriously consider pulling *his own* infantry in to protect *his* force. No combat element, whether Soviet, OPFOR, or U.S., has unlimited infantry assets. Every time a commander can make the opposition commit a portion of its infantry force to defensive rather than offensive activities, he stretches those assets a little thinner and degrades the enemy's overall effectiveness. Usually, such attempts turn out to be high-payoff activities, and even an element as small as an aggressive squad-sized patrol—using the advantage of darkness, surprise, and audacity—can intimidate an entire enemy company.

Commanders must think of their



combat infantry as an offensive, not a defensive, force. To have enough infantry to conduct an offensive patrolling operation, the commander must free his infantrymen from routine security tasks that other elements of the command can handle. A common example of this problem is the misuse of infantry to secure tank platoons at night. Local security, including the manning of dismounted observation posts and close-in security patrolling, is an important battle drill that every tank platoon must be able to execute without additional infantry support.

In one such drill, for example, a platoon of four tanks during conditions of reduced security and limited visibility has one tank on full alert at all times. Two tanks have their crews resting, with the exception of one man alert and searching the area with the vehicle's night-vision devices. The fourth crew, dismounted and with small arms, patrols the local area.

A dismounted infantry patrol is more likely to be heard before it is seen, especially from inside a tank, and a counterreconnaissance patrol operating in the area of the tanks can interdict enemy probes before they can get close enough to use their night antitank weapons. The surveillance and security missions are rotated among the platoon's crews throughout the night to make sure all members of the platoon get some rest.

## GAPS

Once freed from the requirement to provide local security for other combat or combat-support elements, the infantry can be used to control the gaps between battle positions. One of the high-priority tasks assigned OPFOR reconnaissance patrols is to find these gaps for use later as infiltration routes for deep patrols and as bypass routes for penetrating combat elements once the attack begins. Controlling these gaps is a task-force level responsibility, for which the S-2 has primary staff responsibility. The gaps can be controlled by a combination of stationary ambush patrols on likely infiltration routes and mounted patrols that can cover large areas. Of-

ten, just the activity of heavy counterreconnaissance patrolling can discourage individual OPFOR reconnaissance patrols or can deceive them as to the true locations of the battle positions.

In a typical maneuver defense, battle positions deep in a task force's sector will be identified and perhaps prepared, but they may not be occupied until the battle begins. These positions are usually on key terrain features that will play an important role as the defensive scheme of maneuver is implemented. One of the OPFOR's favorite tactics is to have infiltrating elements occupy these positions before the attack begins, thus denying them to the maneuvering defender as the battle progresses and disrupting the continuity of the defensive concept. To prevent this, subsequent battle positions should be occupied at all times by small infantry elements that can detect and engage OPFOR infiltrators. During periods of limited visibility, the mounted counterreconnaissance patrols should periodically check these security posts to make sure they have not been silently eliminated.

But the best way to deny OPFOR reconnaissance elements information about the gaps between the battle positions, or about the deployment of forces deep in the defensive sector, is to interdict and kill those patrols before they reach the FLOT (forward line of own troops). Many units rely on their scout platoon to provide a security screen forward. But the scouts are usually too few, too lightly armed, and spread too thin to effectively stop the relentless OPFOR patrolling effort.

In defensive missions, particularly during periods of reduced visibility, it is wise to reinforce the scouts with additional tanks and infantry. Most units with a defensive mission retain a small combined arms reserve, typically positioned behind the primary combat units. Perhaps a better initial location for the reserve is forward with the scouts to provide the firepower and manpower necessary to conduct an effective screen. The elimination of the screening force is a high-priority task for the tanks and BMPs that are organic to a Soviet reconnaissance company, and the additional combat power the reserve can

provide is often the edge the scouts need to survive against a determined attack by the enemy's reconnaissance company.

When it becomes clear that the enemy's attack has begun in earnest, the reserve can withdraw before it becomes decisively engaged, return to an effective reserve position, and be prepared to conduct its counterattack or reinforcement mission. No combat effectiveness is lost by such initial positioning forward, and much security is gained.

Once successfully established, the screen must be held. In the event the OPFOR succeeds in destroying the scouts, the scout platoon must be replaced immediately by another combat element. There is risk of further losses every time additional elements are sent forward on such missions, but this risk is far outweighed by the losses that will inevitably occur later because the OPFOR was allowed to conduct a thorough and unopposed reconnaissance.

## DECEPTION

Another benefit of reinforcing the screen line is the deception it can sometimes provide. The OPFOR and the Soviets both know the composition of a scout platoon and its likely missions. But when their reconnaissance locates combat elements such as tanks and combat infantry well forward, the OPFOR (or Soviet) regimental commander and his staff must determine what the defending commander's intent is for that force and must prepare several contingency plans to meet it. These additional planning requirements can easily overload a rigid and inflexible command and control system and can significantly detract from the detailed planning a regimental command group must conduct in order to carry out its primary plan.

The task force commander and his S-2 must always work on the assumption that some enemy infiltrators will successfully penetrate even the heaviest screen. Effective counterreconnaissance, therefore, must have different but overlapping security systems to provide mutual support and depth of effort. For example, particular attention



must be paid to the critical security sector extending from the rear of the screen to the forward trace of the main defensive positions. Any traffic behind the scouts but forward of the defensive positions should be assumed to be successful infiltrators until it is positively identified as friendly. A good way to make this identification is to have a mounted ready-reaction patrol available in each battle position to intercept and identify any unknown elements.

Another example of necessary redundancy is in the positioning of a unit's ground surveillance radars (GSR) in depth. At least one set should work forward with the screen to ensure maximum range. A back-up set should be located either in a critical battle position or at a forward task force command observation post to monitor both the scouts and any traffic behind them. An additional benefit of such a deployment is that in the event the forward GSR malfunctions, the back-up set can change its sector of scan to that of the forward set or can even be physically moved forward to replace it. Too often, units place all their GSR equipment on a line, and once their radar screen is penetrated they have no deep or overlapping surveillance capability.

Although an effective screen may stop enemy infiltration efforts, there is no way it can completely stop enemy observation, particularly from long-range positions. The daylight spot reports from the reconnaissance company are among the most valuable sources of early information available to an OPFOR regimental S-2. The OPFOR reconnaissance company uses binoculars and telescopic sights to observe defensive preparations from several kilometers away, simultaneously using hard-to-detect motorcycle scouts to investigate enemy dust signatures.

Once again, the best way to degrade this effort is for counterreconnaissance patrols to move forward of the screen to find the OPFOR reconnaissance company, eliminate independently operating sections, and suppress larger elements with long-range direct or indirect fire. When possible, combat elements should be used to conduct a coordinated assault either to destroy the OPFOR recon-

naissance company entirely or, at the least, to drive it from its favorable positions. A Soviet or OPFOR reconnaissance company that is fighting for its life in a close-in battle is not an effective long-range reconnaissance force.

If the OPFOR reconnaissance company cannot be eliminated or driven back, it must be blinded or deceived. Defensive preparations must be based on the assumption that the enemy can directly observe the forward units. Smoke generators in front of defending elements can provide large volumes of effective concealment for long periods; they can also generate smoke in areas where no actual preparations are being made, making the OPFOR assume that something worth hiding is actually going on there.

Another effective deception measure

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## **If the OPFOR reconnaissance company cannot be eliminated or driven back, it must be blinded or deceived.**

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is to use a few small vehicles such as uncommitted quarter-ton trucks pulling lengths of chain to create extensive dust signatures. This tactic can convince OPFOR scouts that significant preparations are being made at those locations, and might cause the OPFOR S-2 to commit a portion of his limited reconnaissance assets to investigate the sightings, which will divert them from being used on potentially more productive missions.

Barriers, especially antitank ditches, are particularly difficult to protect from enemy long-range observation. Accordingly, during daylight hours priority should be given to placing obstacles deep in the defensive sector. Barriers are often the key to defensive success, but they can be rendered ineffective when located or breached by OPFOR reconnaissance elements. If the surprise value of an obstacle is important, it must be constructed out of sight of the reconnaissance company.

Forward obstacles should be con-

structed at night, for two reasons. First, the preparations are harder to observe accurately. Second, it is an accepted fact that once constructed, obstacles must be patrolled constantly to make sure they are not breached by infiltrators. If the forward barriers are being constructed at night, therefore, they are automatically manned by the soldiers building them. Again, OPFOR reconnaissance patrols are often frightened off by heavy activity and may move to another location where they are less likely to be detected.

Sometimes, however, an obstacle is more effective if the enemy knows about it, especially if its purpose is to channel the attackers into an engagement area. If this is the case, such an obstacle can be constructed in full view of the enemy. OPFOR doctrine prefers to bypass obstacles rapidly instead of taking time to breach them under fire. Often, a weak obstacle that could easily be defeated by a hasty breaching effort can be more effective if the enemy knows it is there and plans in advance to bypass it. In either case, however, the point cannot be over-stressed that, once built, all obstacles must be constantly patrolled.

In sum, the techniques of counterreconnaissance are limited only by the extent of the aggressive spirit of a unit. An effective counterreconnaissance plan must have four vital characteristics:

- It must be offensive. A unit must hunt, not merely trap, enemy reconnaissance elements.
- It must be relentless. Counterreconnaissance is not merely a limited-visibility operation, but a constant process in which every enemy scout, once located, is pursued until killed or captured.
- It must be redundant in the same sense that all assets are used to overlap, achieve mutual support, back up, and complement each other in a well-directed plan. A unit must proceed on the assumption that the enemy can penetrate any one of its security systems and must constantly be on the prowl to detect and destroy infiltrators.
- It must be imaginative. If the enemy cannot be destroyed, he must be blinded. If he cannot be blinded, he must be



deceived. In short, he must be outwitted at every turn.

The failure of his reconnaissance effort can be a fatal blow to the plans of an OPFOR or Soviet commander. Instead of being able to make the most of the shock value of the mass and firepower of his regiment by directing a well-orchestrated and violent attack against known enemy weaknesses, he will be forced to resort to a more hesitant, difficult-to-control approach march formation that can be defeated in detail by an alert and aggressive defender.

But stripping away the attacker's eyes is not an easy task — it requires detailed planning, tenacity, and audacity. It is not just a side show to be considered only when the "important" preparations have been completed. The U.S. commander who fails to assign his counterreconnaissance effort a priority commensurate with its importance to his survival will most certainly be defeated.



Major David J. Ozolek, shown here in the uniform of the opposing forces regiment at the National Training Center, served as S-3 of the regiment and also as S-3 observer-controller of the NTC's operations group. He is now Public Information Officer at Supreme Headquarters Allied Powers, Europe.

# Echo Company

CAPTAIN GLEN L. BURCH  
CAPTAIN CHRISTOPHER B. VALENTINE

The primary mission of the antiarmor company (Company E, or Echo Company) in a mechanized infantry battalion is to provide effective antiarmor fire in support of the battalion's mission. The satisfactory accomplishment of this mission is a direct result of effective organization and well-planned, realistic training.

In the 3d Battalion (Mechanized), 19th Infantry, all of the battalion's M901 (ITV) assets, except for those in the scout platoon, are assigned to Company E. This centralization facilitates training and maintenance management and adds to the unit's cohesiveness.

The company is organized into three platoons and a headquarters element. The first platoon has eight ITVs divided into four sections. The other two platoons have six ITVs each with three sections per platoon. The company headquarters element follows the MTOE except for the addition of a slot labelled "master gunner." The master gunner is the most technically proficient 11H PMOS in the company, and he is responsible for all facets of ITV turret maintenance and ITV-specific training. He advises the

company on training issues and also coordinates the necessary maintenance functions peculiar to the M901's turret. Needless to say, the master gunner plays a major role in effective ITV training and maintenance.

Although Echo Company can be organized in several different configurations, the platoons should always operate as single entities. Usually under the direct control of the Echo Company commander, the platoons must be prepared to operate almost anywhere on the battlefield whether in general support of a task force or in direct support of a company team.

The platoon sergeant of an ITV platoon has many responsibilities. He must coordinate with a supported element or the company headquarters for resupply. He should coordinate closely with the company executive officer (XO) on all logistical matters to take full advantage of all available assets.

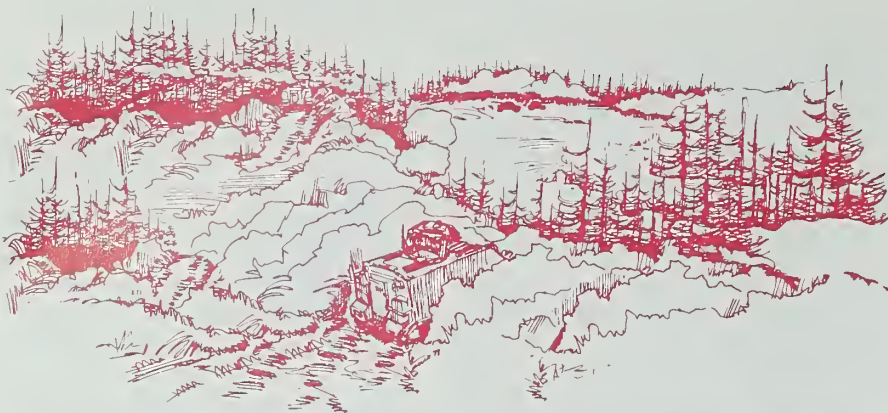
The platoon sergeant is also, by necessity, the most knowledgeable person in the platoon on the technical aspects of the ITV. He should work closely with the company's master gunner in regard to turret problems as well as the resupply

of such TOW-related items as TOW and nightsight batteries and coolant cartridges.

The platoon leader is in charge of all aspects of his platoon's activities. He sees that all logistical needs are met and makes all tactical decisions above section level. He assigns all engagement areas and battle positions and determines the engagement and disengagement criteria for his element. In short, the platoon leader is the direct link between the platoon and the company commander and is responsible for everything his platoon does or fails to do.

To be effective, each platoon must have well-trained sections that can operate with a high degree of independence with little or no visual contact between the vehicles. Since these sections are the backbone of Echo Company, most training should be geared to the section level.

At the same time, the platoons must be trained to operate as independently as possible. A strong, solid SOP (Standing Operating Procedure) will enable the platoons to react to and execute most missions with only a radio message from the commander to trigger an action. Because



of the extended distances between platoons, it is imperative that each be able to operate independently and sometimes without a face-to-face meeting with the company commander.

The individual crews, sections, and platoons can be trained in offensive operations by extracting and modifying (through experience) the tasks, conditions and standards from ARTEP 71-2 and various other texts. Offensive training is intended to teach movement techniques, overwatch drills, and reaction to both indirect and direct fire.

Whenever possible, offensive training should be conducted in conjunction with task force operations, real or simulated. Training should be conducted in maneuver on the flanks; overwatch of a company team (concurrent with overwatching other ITVs); actions on contact, specifically the movement of the ITVs to positions from which they can engage the enemy at the greatest possible range; and the actions of the ITVs at the objective (consolidation and reorganization). Direct and indirect fire should be integrated into this training to evaluate reaction drills; this is also a perfect opportunity to introduce NBC training into the program.

For training in defensive operations, we developed three basic drills, the first involving one crew taking on three OPFOR targets; the second, one section operating against an OPFOR tank platoon; and the third, an ITV platoon of three sections operating against an OPFOR motorized rifle company. Each drill called for the use of MILES equipment for added realism, and in each a task, condition, and standard was given to the participants, together with nine or ten additional sub-tasks.

Once the basics have been taught, success depends upon the proper employment of each ITV system. Based on one of this unit's successful NTC rotations, there are some basic principles that govern ITV employment in both the offense and the defense.

The first principle of the offense is to employ a platoon on each flank of a task force. This technique immediately gives wide dispersion to the commander's long range antiarmor fires, thus making it difficult for the enemy to suppress those fires. Additionally, these platoons become the task force's flank guard.

The second principle is to employ these platoons far forward so that once contact is made, the TOW becomes a 3,000-meter sniper weapon. This is extremely valuable if a surprise contact is made.

The third principle is for these platoons to stay far to the flanks and move in section bounds. They should try to keep 300 meters between vehicles. Often the platoon will be able to slip behind enemy positions because of the OPFOR's preoccupation with the movement of the company teams. During this type of movement, the ITVs must overwatch each other as well as the lead company team. During all of these operations, the platoon leader gives the antiarmor company commander specific spot reports. The company commander then puts all critical enemy sightings and TOW engagements out over the battalion command net.

(It should be noted that by using these principles, this unit destroyed eight or more enemy vehicles in each of its three force-on-force offensive missions at the NTC. Also, during the live fire movement to contact, TOW gunners were credited with 93 confirmed hits on enemy vehicles.)

The principles of the defense are somewhat similar, with dispersion by far the most important. The antiarmor assets should be dispersed to prevent all systems from being suppressed at any one time. The ITVs should be emplaced so that each engagement area is covered by interlocking TOW fires. Although the dismounted M220A1 system is easy to conceal and has a high survivability rate, some TOWs must stay mounted. This adds to the commander's flexibility, and this mounted force can often serve as a task force counterattack-by-fire element.

Local security is a problem that must be carefully looked at. Each gun crew must provide its own local security, and this must be a top priority for each crew.

Once again the platoon leaders make all reports to the antiarmor commander who controls all TOW fires in the defense. Aggressive spot reporting again will provide valuable information to the task force commander.

Company E must be prepared to fight in one of three basic configurations: as a pure company with its own sector and specific mission on the battlefield; as a company team with a tank or rifle platoon attached; or with its platoons spread out across the task force sector in general support. In this third configuration, the company may also have its platoons in direct support of company teams. This would be the most arduous one, for it stretches the logistical capability of the company headquarters and makes it difficult to coordinate the task force's heavy antiarmor fire across the sector.

But if the ITV sections and, to a larger extent, the ITV platoons have been well trained, the company will operate effectively in any configuration and will accomplish any assigned mission.

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**Captain Glenn L. Burch** served as commander of Company E, 3d Battalion, 19th Infantry at Fort Stewart. A 1979 graduate of Canisius University, he has also served as a rifle and scout platoon leader, a combat support company commander, and a battalion motor officer. He recently completed the Armor Officer Advanced Course and is assigned to the NTC.

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**Captain Christopher B. Valentine** served as the executive officer of Company E, 3d Battalion, 19th Infantry. A 1982 graduate of the United States Military Academy, he has also served as a rifle and antitank platoon leader in the battalion. He recently completed the Infantry Officer Advanced Course.

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# Remote Communications Platform

CAPTAIN MARK R. HAYZLETT

Although light infantry division units must be able to maneuver over all types of terrain, they still have to maintain elaborate communications systems. Because of the rapid changes in MTOE, mission, and C<sup>3</sup>I technology, the platform for tactical operations center (TOC) radios is critical to the efficiency of a light unit's operations. The only vehicle the battalion S-3 has is a HMMWV (high-mobility multipurpose wheeled vehicle) with a three-quarter-ton trailer. Any additional vehicles would probably be more of a burden, while a rucksack is not appropriate for the job either. The best way to do more with less, then, is to redesign the TOC at battalion level using a remote communications platform (RCP), such as the one I designed and used in Korea in 1983.

An RCP is simply a modified trailer on which radios and various TOC equipment can be mounted. Instead of being inside a vehicle, the TOC is built around the RCP trailer. A common three-quarter-ton trailer can be modified at unit level to function as an RCP without seriously affecting its utility as a trailer. The accompanying illustration shows exactly how to set up an RCP using the wiring schematic from page 2-43 or TM 11-5820-401-12.

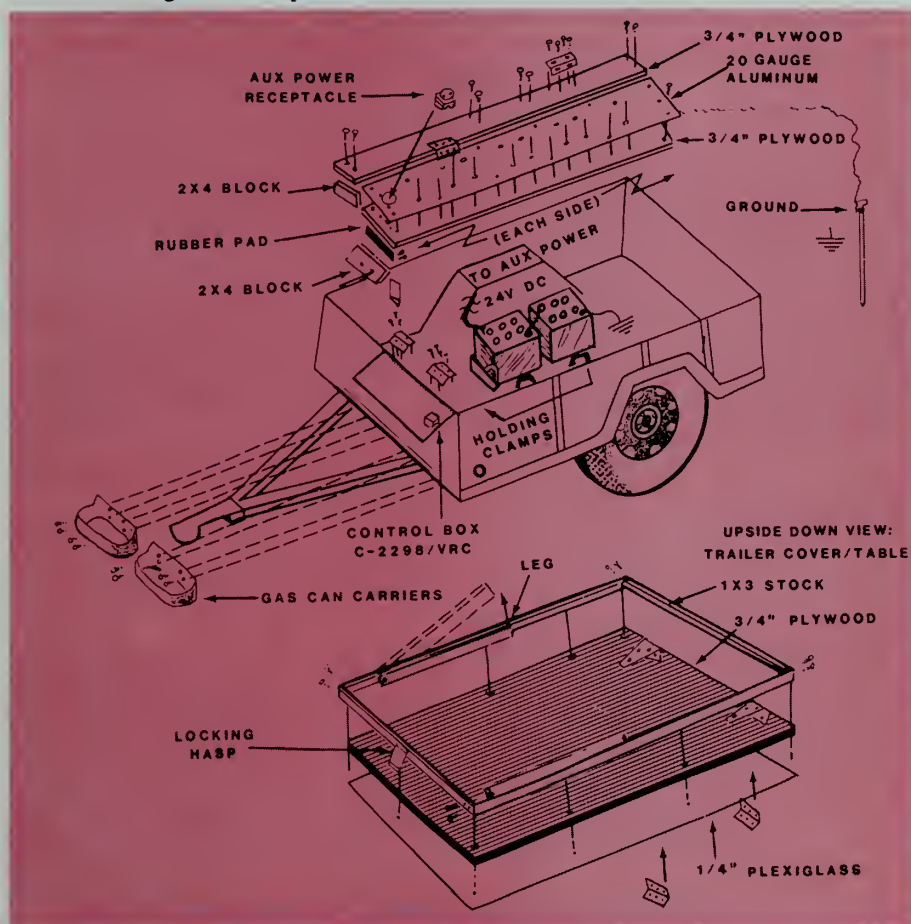
The radio equipment is mounted on a cambered shelf along one side of the trailer. An auxiliary power receptacle is mounted on the shelf, and the floor is drilled to accommodate a dual-battery tray. Finally, a lid is assembled from half-inch plywood and one-by-two-inch stock, hinged at the top of the tailgate and fitted with a sheet of quarter-inch plexiglass on the table top side. Further modifications could include a shelf for the

radio operator that folds out from the forward wall with a junction box and a head-phone jack.

The load inside the trailer should consist of the 4.2-kilowatt generator, two 12-volt tank or truck batteries, antennas, and a footlocker with radio accessories and paperwork. Once the lid is latched over the trailer, tentage and camouflage can be strapped on top with ropes or sling webbing. Diesel fuel cans may be mounted in carriers bolted to the front wall of the trailer for generator operation.

The concept of RCP operations is simple, efficient, and flexible for any battalion mission. The batteries provide silent operation for limited visibility or urban operations for an estimated 36 hours of normal use (without wearing down prime mover batteries). They can be recharged during other power modes with the 4.2-kilowatt generator or when slaved to any 24-volt vehicle system using the NATO receptacle and a regulated circuit in it.

An S-3 equipped with an RCP may choose to move the TOC with his



HMMWV alone, with the RCP towed by another vehicle, or with it sling loaded under a UH-1 or UH-60 helicopter. Although the airmobile capability has not been tested, it could enable a unit to establish complete command, control, communications, and intelligence facilities rapidly in terrain that might be inaccessible to other vehicles without tying up a helicopter the whole time.

An RCP can be placed in operation in the hastiest circumstances by propping the lid open with a stick so the radios can be adjusted. Further preparations could include setting up a tent with the RCP trailer and operators in the vestibule, leaving the map table and the charts in the main tent area. Routine TOC activities could be carried out with less traf-

fic, more security, and more room for planners to do their jobs. Set-up and tear-down would take less time also, since all the equipment would be easy to reach and simple to operate.

The prototype of my design was built by Specialist-4 DeGrace of Troop D, 4th Squadron, 7th Cavalry in Korea in 1983. All he needed was a few sketches, some basic supplies, some hand tools, some advice from the communications shop, and a weekend. We used a quarter-ton trailer, because that is what we had available. Our unit used the RCP to mount two RT-524s with cipher equipment, but the shelf can be drilled for as many variations of installation kits as required. Battalion operations would probably need the larger three-quarter-ton trailer instead.

The most significant advantage to using the RCP is the flexibility for equipping the TOC for a wide variety of missions without sacrificing its performance in any mode. The RCP concept of building the TOC around a trailer, rather than within a vehicle, is a means of getting the job done better with less in an austere light infantry environment.



**Captain Mark R. Hayzlett** is Assistant S-3 of an attack helicopter battalion in the Arizona Army National Guard. Before attending flight training, he served as a light infantry rifle and scout platoon leader with the 9th Infantry Division.

# Mortar Ballistic Computer

**SERGEANT FIRST CLASS JOHN E. FOLEY**

Muleskinners looked upon the truck with fear and loathing; old soldiers said the M1 Garand would never replace the M1903 Springfield; and some others thought helicopters were nothing more than a passing fad. I expect a similar reaction to the new M23 mortar ballistic computer (MBC).

The world is changing, and so is the infantry. With new weapons and tactics being introduced every year, the mortarman has long needed a device to improve his fire control capabilities. The challenge of the future for the mortarman is to be faster and more accurate than ever before, and for longer periods of time. His guns may be spaced 100 meters or more apart to ensure their survivability, but he will still have to maintain control of them and continue to provide timely and accurate fires. The mortar ballistic computer will allow him to do this and more.

The MBC will replace the graphic fir-

ing fan (GFF) and the M16 plotting board as the primary means of fire control for infantry mortars. While the old manual procedures are accurate, that accuracy and also the speed of the computations are dependent upon the skill of the operator and the condition of the equipment. In addition, the GFF and the M16 plotting board are bulky to carry and require a large amount of light if they are to be used effectively.

## STANDARD ISSUE

The M23 will be the standard U.S. Army issue mortar ballistic computer and will be used for all mortar fire direction center procedures. It is in an aluminum casing (OD green), weighs seven pounds (with battery), is ten inches long, seven inches wide, and two inches thick. The battery is a military standard BA-5588U (lithium) model.

The keyboard is made up of 48 separate keys, organized by color — blue keys for initialization, orange for fire missions, white for entering numbers and letters, yellow for review of data, and green for action. The logical sequence of the keyboard and the programming of the computer will automatically select the proper key if the operator makes a mistake or gets out of sequence. These features make the MBC fast and easy to learn, use, and operate. The keyboard itself has a positive feel to it — an operator can even use it wearing gloves with liners.

The most important function for the MBC will be to compute firing data for all standard U.S. mortars. It is also programmed for all currently available ammunition. The operator simply selects the caliber of mortar he wants to use — 60mm, 81mm, or 107mm — and the type of ammunition (including the M720 60mm or the M329A2 107mm



high explosive round) and the MBC will provide the firing data for it. There is no fumbling with computer chips or difficult programming.

An additional advantage is that the computer takes all correction factors such as drift, range, deflection, and MET (meteorological) corrections and applies them automatically to the firing data. No longer is it necessary to determine chart and then command data — the computer will give the operator command data every time. This makes working a surveyed chart and using MET corrections for mortars a better idea. And no longer will the operator have to spend time determining and applying this data to obtain maximum accuracy; the MBC will do it all.

The MBC also has a digital mode and interfaces with the FIST digital message device and the TACFIRE artillery system. The advantages of this system, in addition to reduced transmission time and reduced probability of detection by radio direction finders, are speed and a printed readout. An operator can easily and quickly read a message instead of trying to hear a voice transmission in a busy fire direction center where any part of it could be garbled or lost.

One man, working alone and putting all the information into the computer manually, can have firing data going to the guns in less than 30 seconds from the time he receives the call for fire from a forward observer. The operator can make subsequent adjustments and have the data going to the guns in 10 seconds or less, depending upon his skill.

In the digital mode, it is possible to get firing data in 15 seconds or less; that is, within 15 seconds from the time the operator receives the call for fire, he has fire commands going to the guns.

What about converged or open sheafs? At any time, the operator can select "converged" as a sheaf adjustment. The computer will provide a firing solution for six guns off of one mortar location, so even if the guns are spread out (up to 1,000 meters from the base gun), the operator can have firing data for a converged sheaf as fast as for a parallel sheaf, and faster and more accurately than he can get the data manually. The



computer will also take into account the spacing (direction and distance) between guns and, in the firing data, will give a separate charge and elevation to each gun to compensate for range differences.

Programming the computer initially to perform all these actions is fast, too. A trained operator will need just one minute, 45 seconds to program the computer with four to six guns and two or three forward observer locations.

The size of the area the computer can handle is also impressive. The operator enters the grid coordinates of the lower

lefthand corner of his map sheet, and the computer will allow him to position his mortars anywhere within an area of 100 by 100 kilometers. This works out to a firing chart that covers 10,000 square kilometers, as opposed to the 25 square kilometers that an M16 plotting board can cover. Then the operator can maneuver and reposition his mortars without having to redo the initial set-up data.

With all this space to maneuver in, what exactly can be done with it? The computer has the following storage capacities and capabilities:

- Three concurrent fire missions.
- Three digital messages.
- Three mortar platoon locations (base gun positions).
- Six individual firing position solutions.
- Eighteen individual weapon locations — six per platoon location.
- Three safety zone diagrams.
- Fifty known points or targets.
- One no-fire line.
- Ten no-fire areas with eight points (corners) per area.
- Three final protective fire (FPF) lines.
- Twelve forward observer locations.
- Sixteen registration points.

When a fire mission is computed, the MBC will provide a deflection for each gun — up to six guns per FFE (fire for effect) — and the following information: elevation, fuze setting (if needed), charge, and time of flight. The MBC will also provide the following safety data, based upon the impact of the round from the base gun: range to target, azimuth to target, maximum ordinate, and a 10-digit grid to impact (where the round will land). Illumination safety data will provide the grid to burst, and a grid to impact, should the fuze fail.

The lithium battery is good for about 72 hours of continuous display. Because the MBC will not be on continuously (it has a built-in shut-down that can be programmed for up to 60 seconds), if no switch is pushed the MBC will automatically go to a standby mode to conserve power while retaining all data. When in standby, it will flash a light every six seconds to let the operator know the computer is in that mode.

An additional power source is an internal keep-alive battery that will provide power to keep stored data for up to 20 hours, so stored data will not be lost when batteries are changed. Vehicles can also be used to power the MBC. Two power cables are provided with it — one can hook the MBC up to the battery of any vehicle, bypassing its own internal battery; the other can hook onto the radio mount of a tactical vehicle and tap power from there to run the MBC.

The entire Army, including National Guard and U.S. Army Reserve units,

are scheduled to have the MBC by the end of Fiscal Year 1987. The organization and basis of issue will be two MBCs per firing section. Under Division 86, this means that a six-gun mortar platoon, with two firing sections (three guns per section) will have four MBCs per platoon. Because they can be programmed for safety diagrams and are reliable and accurate, they can be used without manual back-ups, even in training situations.

Infantry Mortar Platoon Course students will be trained in the use of the MBC, receiving two weeks (80 hours) of instruction on it. And to help units learn to take advantage of the MBC, a new equipment training team (NETT) will visit each division and separate brigade and also give 80 hours of instruction.

### MANUAL PROCEDURES

This does not mean that manual procedures will be abandoned. In fact, before a soldier can use or be trained on the use of the MBC, he must master the manual procedures and pass the usual tests on them. He must be qualified at least to MOS 11C skill level 3 before he can be accepted for instruction by a NET team.

The computer is a tool to be used; it is not a toy or crutch to replace training. It offers more challenges to a mortar platoon's FDC section because the personnel of that section must now be faster and sharper than ever before to take full advantage of the MBC's speed and capabilities. At the same time, though, it can be practiced more because it does not require much space or light. In the dayroom, on a bus or truck, during concurrent training at the range — these are all times when an FDC section can practice and improve its skills on the MBC.

At the same time, though, the skills needed to operate the manual equipment must also be maintained. Obviously, if an operator's MBC is lost or destroyed for whatever reason, he must continue the mission. This means staying proficient with the M16 plotting board. (Each FDC section will continue to be

equipped with two M16 boards for use in emergencies.)

At the Infantry School, I had an opportunity to control live fires for both the 81mm and the 107mm mortars using the prototypes of the MBC, and the results were excellent. The computer proved faster and more accurate than either the M16 plotting board or the graphic firing fan. The MBC is also more compact to carry and easier to use during inclement weather than either of the manual methods. Having only one procedure for all three types of mortars also simplifies and speeds the computation of firing data.

The MBC will also calculate the differences in firing from ground-mounted and carrier-mounted mortars; and with the 107mm mortar, when the deflection limits are exceeded or when a charge greater than 32 is attempted when the elevation is at 1065, the computer will not compute data but will flash a warning to the operator. The computer will also tell the operator when he is violating safety fans or no-fire zones or lines, which makes it very safe for use in training.

There will be fewer mortar platoons in the future, but those platoons will be equipped with more guns than before. With one platoon of mortars per battalion, a mortar platoon will have to be even more responsive and accurate. Timely and accurate mortar fires can be the difference between success and defeat and, at a more personal level, between life and death on the battlefield.

Our challenge is clear—use the mortar ballistic computer to give us the edge in speed and accuracy so that, with fewer guns and more responsibility, we can fight and win, today, tomorrow, or whenever we are called upon to let our guns speak!



**Sergeant First Class John E. Foley** wrote this article while serving as a mortar instructor in the Infantry School. Since that time, he has served with the 5th Infantry Division and is now assigned to the 3d Battalion, 2d Infantry, Schofield Barracks, Hawaii.



# ENLISTED CAREER NOTES



## CORRECTION ON HAAP

The item on eligibility for the Home-base/Advanced Assignment Program (HAAP) that appeared in *INFANTRY*'s May-June 1986 issue, p. 45, needs to be corrected.

The fourth paragraph of that item should read as follows:

A specialist-4 who is on a promotion list, in receipt of assignment instructions, and promoted to sergeant before departing from his losing duty station will be given a HAAP assignment. He should initiate a DA Form 2635 preference statement about 10 months before his scheduled DEROS (date eligible to return from overseas). A specialist-4 who is on a promotion list to sergeant, but who is not promoted until after he arrives in the short-tour area, is *not* eligible for a HAAP assignment.

## CMF 11 RESTRUCTURING AND POSITION UPGRADES

CMF 11 (Infantry) is being restructured, and the positions in heavy mortar platoons are being upgraded. These changes are expected to improve the combat readiness and tactical proficiency of infantry units, and they will have a considerable effect upon infantry senior NCOs.

The restructuring of CMF 11 will allow soldiers in each MOS (11B, 11C, 11H, and 11M) to progress to the rank of master sergeant instead of to sergeant first class. At the rank of sergeant major, the MOS will be 11Z rather than 11B. This will allow master sergeant positions and senior infantry NCOs to be identified by MOS on the basis of job requirements and individual experience. All four CMF 11 MOSs clearly lead to the rank of sergeant major.

To help make sure First Sergeants have experience with the modern weapon sys-

tems, organizations, and tactics of their companies, First Sergeant positions will be coded MOS-specific: The First Sergeants of infantry companies will be 11Bs, of antiarmor companies 11Hs, and of Bradley companies 11Ms. And, to provide TOE First Sergeant opportunities for 11Cs, they will be First Sergeants of the headquarters companies of mechanized infantry battalions.

The position upgrades in heavy mortar platoons complement the other U.S. Army Infantry Center initiatives to improve these platoons. The platoon sergeant position will be upgraded to master sergeant, a decision based upon the increased responsibility that comes with two sections (to be employed separately) and with the increased firepower provided by the 120mm mortar. In addition, the section sergeant will be upgraded to sergeant first class, and one chief computer in each FDC section to staff sergeant. In a cavalry troop mortar section, the section leader and squad leader positions will be upgraded to sergeant first class and staff sergeant, respectively.

Enough TDA positions will also be re-coded to better align the authorization structure for each CMF 11 MOS. The mix of 11B, 11C, 11H, and 11M in TDA positions will improve the promotion opportunities in each MOS and eliminate the present 11C bottleneck, which resulted in no 11C sergeant first class selections by the past two promotion boards.

These changes are to take effect early in Fiscal Year 1987.

## OPERATIONS AND INTELLIGENCE COURSE

The Army's Operations and Intelligence Course, conducted at the Sergeants Major Academy, Fort Bliss, Texas, is a newly accredited noncommissioned officer course. The ten-week course is designed to teach the students everything

they will need to know to be operations and intelligence sergeants.

These soldiers serve as principal staff NCOs on all matters concerning operations, plans, organization, training, and military intelligence. They maintain the current operations and intelligence estimate of the situation in coordination with other staff personnel and prepare, coordinate, and publish operations plans and orders.

Normally, operations and intelligence NCOs have experience in combat arms specialties, but the Army does not have a formal MOS for them. Training these NCOs can put an extra burden on the units, and it can take eight months to a year for them to be fully proficient. With the new course, these NCOs can be ready to go to work as soon as they report to their units.

The first seven and one-half weeks of the course cover 381 academic hours of lectures, conferences, and structured class discussions. The subjects covered include AirLand Battle doctrine, security management, Soviet doctrine, military briefing and writing, intelligence actions, and air-ground operations.

The course also covers 32 hours of instruction in the Joint Interoperability Tactical Command and Control System (JINTACCS), which is the way all the U.S. armed services will communicate in the future. The students must pass a test and become JINTACCS qualified and certified, and this enables them to instruct their subordinates in the system.

During the last two and one-half weeks of the course, the students get a chance to practice what they have learned in the classroom through a one-day (eight-hour) field training exercise (FTX). They also participate in a realistic, seven-day command post exercise (CPX) that in effect puts them in tactical operations centers at brigade level, in two mechanized infantry battalions, and in one armor battalion. By rotating through the different

areas, the students can become familiar with tactical facilities.

Before the students can graduate, they must have passed six graded examinations, a physical fitness test, a written decision paper, and an oral decision briefing.

The students are nominated for the course by their major commands on the basis of space allocations, and nominations are open to all MOSs. Soldiers must be in the ranks of SFC/PSG or above, have secret clearances, be Advanced NCO Course graduates, and be currently in or going to operations and intelligence jobs. They also must have demonstrated good communications skills.

In 1987 the Academy plans to offer four classes in this new course with 150 students per class.

## **QUALITATIVE MANAGEMENT**

The Army's Qualitative Management Program (QMP) was created to improve the quality of the enlisted force. It does this by denying reenlistment to soldiers who do not measure up to Army standards. It also prevents promotion stagnation by removing unproductive soldiers.

The QMP has two parts—qualitative retention and qualitative screening—and each operates independently.

Qualitative retention, commonly known as the "up or out" policy, sets time limits called reenlistment ineligibility points. These points are the maximum number of years of active federal service that a soldier of a specific rank may have and still stay in the Army.

Soldiers cannot reenlist or extend beyond the reenlistment ineligibility points for their ranks. For example, a sergeant cannot serve longer than 13 years.

The general court martial convening authority or the first general officer in a chain of command can, under certain circumstances, grant a waiver of a reenlistment ineligibility point. Waivers allow commanders to keep certain soldiers the Army needs. An example would be an outstanding mechanic who is a good soldier but who would not be a good motor sergeant.

The qualitative screening part of the program is most commonly associated

with the term QMP. Under this sub-program, centralized Department of the Army boards review soldiers' records to determine whether they have the potential for continued service. If they do not, the board selects them for DA bars to reenlistment.

Sergeants with more than 11 years of active federal service, and all staff sergeants through sergeants major (with less than 28 years of service), are eligible for selection for DA bars under qualitative screening. And once a bar is imposed, it can be removed only by the HQDA Reenlistment Appeals Board.

Soldiers and commanders can appeal these bars, but if they do not, the soldiers' careers will end at the expiration of their terms of service. The Army therefore encourages commanders and administrative personnel to help soldiers prepare and submit QMP appeals.

Soldiers who have questions about their eligibility to reenlist or extend should contact their unit reenlistment personnel or their commanders.

## **OVERSEAS ASSIGNMENT**

Soldiers often wonder when they can expect to receive overseas reassignment instructions. According to MILPERCEN several factors determine whose turn it is to be sent overseas.

One of the primary factors is how long a soldier has been assigned in the United States. The date returned from overseas (DROS) identifies those who have been here the longest and so are due to rotate overseas.

A soldier who has an additional skill identifier or skill qualification identifier, however, may rotate at a different rate from his peers, depending on the Army's needs and on the number of other soldiers who have those skills.

Soldiers who volunteer or reenlist for overseas areas are placed on assignment instructions before soldiers who do not volunteer. A large number of volunteers for overseas assignments can delay rotation for nonvolunteers.

Soldiers already overseas who extend their tours also affect those still in the U.S. The longer some soldiers stay over-

seas, the longer their peers could remain in the U.S.

If a soldier's MOS is in the Space-Imbalanced MOS Program, which means that 55 percent or more of the authorizations are overseas, he can expect to rotate more often—perhaps even every 12 months.

Soldiers in understrength MOSs can expect to rotate more often than those in overstrength MOSs.

Changes in authorizations, activation and deactivation of units, strength of a certain MOS, and promotion rates all contribute to personnel turbulence.

MILPERCEN career branches can tell soldiers about how long they can expect to remain in the U.S., but that also changes from month to month.

## **ARMY DIVERS NEEDED**

Any soldier who really wants a challenge should consider trying to become one of the 77 divers in the U.S. Army Diving Detachment.

According to AR 611-75, to qualify a soldier must:

- Have a GT score of 110 or higher.
- Have a GM score of 100 or higher.
- Receive an Army Physical Fitness Test score of at least 240 (10 higher than that required for Ranger training).
- Pass a Class B flight physical.
- Be a male between 18 and 30 years of age.
- Be between the ranks of PV2 and SP4. (Specialists-4s must not have more than a year's time in grade.)

Soldiers who meet these qualifications and pass a pre-screening sequence of tests attend the Navy Dive School in Panama City, Florida.

The training and testing are rough, physical fitness is strenuous, and attrition rates are high. But those who make it earn their titles as second class divers.

## **ANCOC AND MSG PROMOTIONS**

Beginning in 1988, graduation from the Army's Advanced Noncommissioned Officer Course (ANCOC) will become a prerequisite for promotion to the rank of master sergeant.



Effective with the calendar year 1987 master sergeant selection board, scheduled to convene next summer, sergeants first class with a date of rank of 1 April 1981 or later must have graduated from the course to be considered for promotion.

Soldiers selected by this board will not actually be promoted until some time in 1988.

Soldiers who complete ANCOC through the Army Correspondence Course Program (ACCP) before 1 October 1986 can be awarded nonresident credit. After that, however, credit will be given only for the resident course. Sergeants first class with a date of rank of 31 March 1981 or earlier will not have to meet this requirement because, at that time, constructive credit sometimes was awarded for the advanced course.

This change to the Active Army promotion system originated from the recent Noncommissioned Officer Professional Development Study. That study revealed that NCO Education System (NCOES) courses are neither progressive nor sequential, that most of the courses are developed independently of the others, and that ACCP versions of the NCOES courses are unreliable. The study group therefore recommended establishing a clear philosophy of "train, promote, and utilize" and a long-range goal of an NCOES that would be mandatory, sequential, progressive, and linked to promotion.

As a further change, all ACCP NCOES courses soon will be renamed (with the new name yet to be selected). Although credit no longer will be given for these courses after 1 October 1986, soldiers who complete the correspondence course after this date will receive certificates reflecting the new title.

To make sure soldiers are not penalized under the policy change, MILPERCEN will identify all sergeants first class with a date of rank later than 31 March 1981 who have not attended the advanced course and schedule them for attendance on a priority basis. Soldiers in this category who have not received a class date should contact their local military personnel officer, who, in turn, will arrange a class date through the MILPERCEN career branch.

Soldiers who were previously "eliminated" from the advanced course may request re-entry under the new policy, provided their dismissal occurred at least one year before the submission of the request. Previously, under AR 350-1, soldiers who were removed from the course were ineligible to retake it. Now that the course is mandatory, however, MILPERCEN did not want to ban soldiers permanently from the promotion because of something in their past.

Requests should be made through command channels to Commander, MILPERCEN, ATTN: DAPC-EPT-FN, 2461 Eisenhower Avenue, Alexandria, VA 22331. Immediate commanders will

recommend approval or disapproval and must specify their reasons. Lieutenant colonels, colonels, and generals in the soldier's chain of command may disapprove requests without forwarding them to the center.

## RC CMF 18 TRAINING

The Army Reserve Personnel Center (ARPERCEN) is looking for Individual Ready Reserve (IRR) Special Forces qualified enlisted soldiers to apply to participate in Career Management Field (CMF) 18.

Opportunities for advancement and professional development have been greatly expanded. IRR soldiers can train with Reserve SF units in the United States or overseas. They can attend advanced Special Forces schools such as Survival, Evasion, Resistance, Escape (SERE) or Scuba. They can also apply for reassignment to Special Forces Individual Mobilization Augmentee (IMA) positions.

Additionally, CMF 18 Reservists currently qualify for a bonus when they reenlist in the IRR.

For more information or career guidance, IRR soldiers may contact SFC Thomason at the Enlisted Personnel Management Directorate, ARPERCEN. Call tollfree (800) 325-4750, or write Commander, ARPERCEN, ATTN: DARP-EPAIN/SF, 9700 Page Blvd., St. Louis, MO 63132-5200.



# OFFICERS CAREER NOTES



## GETTING PROMOTED

Being selected for promotion by a Department of the Army centralized officer promotion board is only half the mission. Being sequenced properly on the promotion list is the other half, and an officer can help see that his name is properly sequenced.

The Officer Master File (OMF) contains several key data elements that determine seniority on the Active Duty List (ADL) and promotion lists. If any one of these data elements is inaccurate, sequencing may also be inaccurate and promotion may be delayed.

An officer should pay particular attention, during his birth month and promotion officer record brief (ORB) audits, to his dates of rank (DOR), active federal commissioned service (AFCS), and entry on active duty (EADC). These data, along with the following six rules, are the principles that govern seniority:

**Current date of rank.** For the first lieutenant and chief warrant officer-2, this date, computed at his local personnel office, is determined by the rules in AR 624-100. For an officer in the rank of captain and above, the Officer Promotion Section assigns DOR, and the earlier his promotion, the more seniority he has over those promoted later.

**Previous date of rank.** If an officer's previous DOR is earlier than that of others who share his current date of rank, then he is considered senior to them.

**Active federal commissioned service.** This amounts to the total number of months (first three digits) and days (fourth and fifth digits) of active federal service as a commissioned officer or warrant officer in any service. It is computed at the beginning of each fiscal year to reflect the total number of months and days served as of the end of the next fiscal year. Unless an officer has had active duty for training credit, previous

warrant officer service, or an interservice transfer, his active federal commissioned service should account for all time served from his current entry on active duty (to include travel time if he is a Reserve officer) through the end of the current fiscal year. If he shares the same current and previous dates of rank with other officers on the promotion list, he is senior to others if he has more active federal commissioned service to his credit.

**Date of original appointment.** This is the date an officer took his oath of office and accepted his commission as an officer. He can verify the date of appointment by referring to the certificate (Department of the Army Form 71) he signed at his commissioning ceremony. The date of original appointment should be the date on which he signed that form. If he has equal dates of rank and active federal commissioned service with other officers on a promotion list, he will be senior if he took his oath of office on an earlier date.

**Date of birth.** This item is simply an officer's birthday expressed in a six-digit fashion. If he is older than other officers on the promotion list with whom he shares identical dates of rank, active federal commissioned service, and dates of original appointment, then he will be sequenced above those officers by virtue of age.

**Alphabetically by last name.** This means that last names are sequenced from "Aa" to "Zz" when all other sequencing factors fail to break a tie.

The fifth and sixth of these sequencing factors do not apply to officers who received their commissions from the United States Military Academy, because all who graduate from West Point on the main USMA graduation date are sequenced in order of their final class standing.

## SIGNING OER FORMS

Under AR 623-105, a rated officer must verify the accuracy of parts of his Officer Evaluation Report (OER). These parts are the administrative data in Part I; the designated rating officials, Part II; and the Army Physical Fitness Test and height and weight entries in Part IV.

If an officer signs blank copies of DA Form 67-8, it is like signing blank checks, and it may be difficult to correct the data later. In such situations, the rated officer must prove that the error should be corrected, and such an appeal requires extra effort to establish how or why he signed the OER in Part IId but was unaware of the error.

Since OERs often need to be retyped, there is nothing wrong with rated officers signing a few extra DA Forms 67-8, but all the administrative data in parts I and II and items 3 and 12 in Part IVa must be entered on the forms and verified by the rated officer before he signs it.

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## CSC SELECTION BOARD

A Department of the Army selection board is scheduled to convene on 1 October to consider eligible officers for selection to attend resident command and staff college (CSC) courses in academic year 1987-88.

To be eligible for consideration, an officer must:

- Hold the rank of lieutenant colonel, major, or promotable captain as of the board's convening date. Officers selected for promotion by the 1986 majors selection board will be considered by the CSC board.

- Have completed fewer than 14 years of active federal commissioned service as of 30 September 1986.

- Be a graduate or have credit for completion of an officer advanced course;



or be a graduate of the Combined Arms and Services Staff School (CAS<sup>3</sup>), or an enrollee in or a graduate of Phase I CAS<sup>3</sup>. Officers who have completed the nonresident Command and General Staff College program are eligible for selection to attend a resident course.

- Have not attended or declined to attend a resident command and staff college or an equated foreign college.

Reserve Component officers on extended active duty who are otherwise eligible will remain eligible for CSC consideration as long as they will not reach their mandatory release from active duty dates or retire before 1 October.

Evaluation reports must arrive at the Evaluation Report Branch at MILPERCEN (DAPC-MSE-R) by 1 October. Only originals will be accepted.

Officers who are eligible for consideration should review their records to make sure they are correct and up to date. Each officer's record should contain a photo and a current record of physical examination. The selection board will review photographs in hard copy.

Officers can get free copies of their Official Military Personnel Files (OMPFs) and Officer Record Briefs (ORBs) by writing to Commander, MILPERCEN, ATTN: DAPC-MSR-S, 200 Stovall Street, Alexandria, VA 22332-0400. Social security number and current mailing address must be included.

MILPERCEN has established a special processing unit to handle OMPF updates for eligible officers. Updates should be sent to the above address with the addition of the following on the attention line: (Special Processing Unit, CSC Board).

Eligible officers may write letters to the board in their own behalf addressing them to President, 1986 Command and Staff College Selection Board, ATTN: DAPC-MSB, 200 Stovall Street, Alexandria, VA 22332-0400. Letters must arrive by 1 October and must include complete social security numbers.

Letters to the board president should not be used to update the OMPF. Letters and authorized enclosures become

part of the board record and are *not* added to the OMPF.

Additional information is available from Major Berriman, AUTOVON 221-8100, commercial (703) 325-8100.

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## TRANSITION BOARD

An OPMS implementation transition board, convened to review the qualifications of commissioned officers currently designated in two branches or two functional areas, was completed in May 1986.

Officers in the ranks of captain through lieutenant colonel (Year Groups 1966-1978 only) were affected. All colonels, promotable lieutenant colonels, and officers in Year Groups 1965 and earlier will be automatically "grandfathered" with their present designations unless they want to be redesignated.

The options the board considered included officers who would be "grandfathered," be "single-tracked" in one of their current branches or functional areas; retain one of their current branches or functional areas; or retain one of their functional areas and add a branch.

Officers whose files were reviewed were notified and allowed to accept the recommendation or submit a reclama requesting another option.

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## OAC QUALIFICATION FOR RCs

Reserve Component officers entering an officer advanced course (OAC) must now complete at least four weeks of the course in residence. This change was effective in October 1985 for the enrollees.

TRADOC has therefore reduced the USAR School OAC from a six-phase (three-year) course to four phases (two years). Phase I, based on the OAC common core, is conducted through both the correspondence and the USAR School inactive duty training modes. The remaining phases are branch specific, with Phases II and IV mandatory Active

Duty Training (ADT), and Phase III conducted through correspondence alone.

The ADT phases, for the most part, are conducted by USAR School personnel at a TRADOC service school site. A few are conducted by the proponent school.

Phase I is included in the February 1986 edition of DA Pamphlet 351-20, Army Correspondence Course Program Catalog, along with some of the branch specific Phase IIIs. The remaining Phase IIIs will appear in the next catalog. Although it is a decision for the service school, generally the phases are not prerequisites for each other, and they can be taken out of sequence.

Students who were actively enrolled in either USAR School or correspondence OAC during Fiscal Year 1985 can either convert to the new four-phase course or complete the course through correspondence. ("Actively enrolled" is defined as either completion of an OAC phase during FY 85, or officially enrolled in correspondence OAC as of 30 September 1985).

Under the new four-phase strategy, enrollment has been terminated for nonparticipating correspondence or USAR School students who were previously enrolled in an OAC.

Correspondence students who are uncertain of their status should contact the Institute for Professional Development, U.S. Army Training Support Center, Newport News, VA 23628-0001, or the appropriate TRADOC branch school.

Another requirement of the new plan is that OAC be completed within three years of promotion to captain. Those officers seeking consideration for battalion command must complete the branch OAC for the type of battalion they are to command.

TRADOC service schools have been instructed to remove all pure correspondence OACs from the ACCP catalog.

An RC officer who is branch transferred will attend the OAC for his new branch. An officer who branch transfers after qualifying in an OAC should complete the three branch-specific phases for his new branch.



# BOOK REVIEWS



Once again we are pleased to bring you information about certain recently published books that we think are worthy of your attention:

• **CENTRAL AMERICA: THE REAL STAKES**, by Lester D. Langley (Crown, 1985. 288 Pages. \$15.95). The author, a professor of diplomatic history at the University of Georgia who has written extensively on Latin American affairs, draws heavily on his personal experiences while traveling throughout Central America and the Caribbean areas to tell us that "Central America must be a nation" and that without this the region's "23 million will continue to endure state governments incapable of meeting their needs."

He does not see this coming about peacefully. But he feels strongly—and this is the central theme of his book—that the place of the United States "in this future conflict should be outside Central America ... to shield the Central Americans from other meddlers, like the Cubans or Soviets." In short, Langley believes the Central Americans must be left to solve their own problems, which they can and will if given a chance, because "there really is no American solution to Central America's problems."

• **A HISTORY OF BLITZKRIEG**, by Bryan Perrett (Stein and Day, 1983. 296 Pages. \$17.95). Although parts of this book have been overtaken by more recent developments, it still provides considerable food for thought and should be read by all infantrymen. The author has a number of other military-oriented books to his credit and here discusses the development of the blitzkrieg concept and its successes and limitations.

He includes an interesting chapter on the development and use of assault guns and tank destroyers during World War II. At the end he concludes that properly constituted and supported conventional forces that know and understand the tenets of the blitzkrieg technique can con-

tain and defeat it. He feels, too, that so long as NATO's conventional forces are not reduced below a minimum level, those forces should be able to contain larger Soviet armies that have been armed and trained for a blitzkrieg advance.

• **MILITARY INCOMPETENCE: WHY THE AMERICAN MILITARY DOESN'T WIN**, by Richard A. Gabriel (Hill and Wang, 1985. 208 Pages. \$16.95). The author has been attacking the U.S. military officer corps for years and does not add much to his previous arguments in this book. His main thesis is a simple one, and this is how it appears in this book: "The American military has failed to meet the test of battle because its structure is so deformed that it cannot produce officers—planners and leaders—who are well versed in the arts of war." He goes on to say that "by any historical standard, the failure of the American military to fight well and win must be laid at the feet of the officer corps which leads it."

Gabriel's solution is always the same—the value structure of the military services must change; the military services must adopt and strictly enforce a code of ethics; there must be more assignment stability; there must be a smaller officer corps, the members of which must be required to serve at least 30 years; the promotion of officers should be linked to age; the officer education system must be changed; and the Joint Chiefs of Staff must be abolished.

• **THE RISE AND FALL OF AN AMERICAN ARMY: U.S. GROUND FORCES IN VIETNAM, 1965-1973**, by Shelby L. Stanton (Presidio Press, 1985. 411 Pages. \$22.50). If you want to know how the U.S. Army and the U.S. Marine Corps fought the ground war in Vietnam, this is the book you'll need. Drawing heavily on the material he gathered for his authoritative and well-received *Vietnam Order of Battle*, the author tells how the Army and Ma-

rine Corps raised their combat units, deployed them to Vietnam, and employed them in the battle zone. What Stanton does best is to portray how difficult a time the ground combat units had throughout the war years, and how difficult their own country's military and civilian leaders made it for them. To Stanton, "the United States soldiers and Marines in Vietnam fought through some of the most difficult terrain in the world, and some of the toughest encounters in American military history. However, they fought without benefit of the country's larger military machine programmed for their support in case of war .... The magnificent courage and fighting spirit of the thousands of riflemen, aircraft and armored crewmen, cannoneers, engineers, signalmen, and service personnel could not overcome the fatal handicap of faulty campaign strategy, incomplete wartime preparation, and the tardy, superficial attempts at Vietnamization. An entire American army was sacrificed on the battlefield of Vietnam." Fortunately for the readers, Stanton includes a fine set of maps and a detailed listing of his sources.

This is one of those books every U.S. infantryman should own. And unlike Gabriel, Stanton does not fault the entire officer corps.

• **TO THE HALLS OF THE MONTEZUMAS: THE MEXICAN WAR IN THE AMERICAN IMAGINATION**, by Robert W. Johannsen (Oxford University Press, 1985. 363 Pages. \$25.00). This is not a military history of our war with Mexico in the mid-19th century. Rather, it is a history of how the American people looked at the war and the effects that war had on the country as a whole and on the individuals who fought in it. The author, a professor of history at the University of Illinois, Urbana-Champaign, has excellent chapters on the American soldier of the era, both regular and volunteer ("bad feelings between the volunteers and the regulars



persisted throughout the war"); patriotism; heroism—and brutality; and the reactions of the soldiers to the foreign environment in which they found themselves.

This is a valuable historical work that goes to the heart of this war far better than works of pure military history manage to do.

- **SOVIET LAND POWER**, by Mark L. Urban (Hippocrene Books, 1985. 128 Pages. \$19.95). The author has truly done his homework and here gives one of the better analyses of Soviet land power, including detailed information on its organization, deployment, command, and efficiency. Although the book is now almost two years old, little of its content requires modification today.

The author, an acknowledged expert on Soviet military affairs, offers his thoughts on how the huge Soviet land machine might be employed in the future. He does find faults—some major—in the Soviet land machine, but he concludes that a war against the Soviet Union “would be an unspeakable catastrophe.”

- **BARON VON STEUBEN'S REVOLUTIONARY WAR DRILL MANUAL**. A Facsimile Reprint of the 1794 Edition. (Dover Publications, 1985. 156 Pages, Softbound. \$4.95). This interesting little publication is a reprint of the “new edition” of von Steuben's *Regulations for the Order and Discipline of the Troops of the United States*, which were approved by Congress on 29 March 1779. For this facsimile reprint, which also includes as an appendix the 1792 United States Militia Act, the publisher has prepared a new publisher's note and converted the original foldout plates to either single- or double-page plates.

The manual itself was known as the Army's “blue book” and remained the official U.S. military guide until 1812. Have things changed much? Here is a portion of von Steuben's instructions to captains: “A captain cannot be too careful of the company the state has committed to his charge. He must pay the greatest attention to the health of his men, their discipline, arms, accoutrements, ammunition, clothes and necessaries. His first object should be, to gain the

love of his men, by treating them with every possible kindness and humanity, enquiring into their complaints, and when well founded, seeing them redressed. He should know every man of his company by name and character.”

This is a book that anyone interested in the history of our Army should have in his personal library.

Finally, here are the titles of more uniform books we have recently received from the Osprey Publishing Company:

- **RESISTANCE WARFARE**, text by Carlos Caballero Jurado, color plates by Paul Hannon. Men-at-Arms Series 169, 1985. 48 Pages. \$7.95, Softbound.

- **AMERICAN CIVIL WAR ARMIES: CONFEDERATE ARTILLERY, CAVALRY AND INFANTRY**, text by Philip Katcher, color plates by Ron Volstad. Men-at-Arms Series 170, 1986. 48 Pages. \$7.95, Softbound.

- **SALADIN AND THE SARACENS**, text by David Nicolle, color plates by Angus McBride. Men-at-Arms Series 171, 1986. 48 Pages. \$7.95, Softbound.

- **THE KOREAN WAR, 1950-53**, text by Nigel Thomas and Peter Abbott, color plates by Mike Chappell. Men-at-Arms Series 174, 1986. 48 Pages. \$7.95, Softbound.

- **THE ANCIENT GREEKS**, text by Nick Sekunda, color plates by Angus McBride, Elite Series 7, 1986. 64 Pages, Softbound.

- **ISRAELI DEFENSE FORCES SINCE 1973**, text by Sam Katz, color plates by Ron Volstad, Elite Series 8, 1986. 64 Pages, Softbound.

And here are a number of our longer reviews:

**BURMA: THE LONGEST WAR, 1941-45.** By Louis Allen (St. Martin's Press, 1984. 686 Pages. \$29.95). Reviewed by Doctor Edward J. Drea, United States Army Military History Institute.

During World War II, a young British Army intelligence officer named Louis Allen served in India and Burma as a Japanese linguist. Ever since, he has maintained a keen interest in Southeast Asia and has written accounts of British and Japanese military operations in that region.

This book represents the culmination of more than 40 years of study of this theater of war that most Americans associate with “Vinegar Joe” Stilwell and Merrill's Marauders. The American oversight is unfortunate on several counts. First, victory in Burma was an Allied effort, primarily commanded by the British and fought by Indian Army units. Second, the view ignores such command personalities as Lieutenant General Sir William Slim, Brigadier Orde Wingate, and Admiral Lord Louis Mountbatten, not to mention their opponents such as Lieutenant Generals Miyazaki Shigesaburo and Mutaguchi Renya. Finally, this parochial approach overlooks the significant tactical innovations that shaped the campaign in Burma in 1944 and 1945.

Allen's extensive use of Japanese-language materials complements his command of British and Indian accounts, but relatively few American, and provides an almost eerie balance to a savage war that men fought, in most cases, without quarter. Nor does Allen slight the Burmese, whose country was twice fought over, but not fought for, by the combatants. He covers the Chinese effort only briefly, for his main emphasis, quite naturally and correctly, centers on the efforts of British Empire forces to turn defeat into victory.

Although the author deals with grand strategy briefly and well, his attention is on the officers and men of the opposing forces who bore the brunt of the battle against both enemy forces and the natural environment. Seldom have so many men been forced to fight in such an unhealthy and debilitating place for so long as did those Allied and Japanese soldiers consigned to the contest in Burma. Allen best narrates the reactions and adjustments of combat soldiers to the appalling battleground conditions.

Another of Allen's great strengths is his ability to infuse personalities—from army commanders to privates—with individual character and vitality. In this terrible war, he always manages to retain the human qualities that underscore why men fought and died for trackless jungle wastes. His balanced treatment presents the Japanese as recognizable human beings, cruel and savage to their



opponents but subject to the same emotions as their Allied counterparts.

The evolution of airheads and the use of air transport were the highlights of the tactical evolution that took place during the campaign. Wingate's columns and Merrill's Marauders employed such tactics with success, but the concept grew from the seeds planted by the so-called "admin-boxes" in which aerial resupply of encircled units became a standard, not a desperate, tactic to counter the Japanese "hook and block" maneuvers.

One area of weakness in the book is Allen's understanding of the role of ULTRA and signals intelligence during the Imphal-Kohima operations. Although the British Government still controls ULTRA materials from the Burma theater, sufficient references to Japanese units in Burma do appear in American ULTRA documents to lead one to conclude that the full story of intelligence, command, and operations in Burma is a topic still awaiting an author.

In sum, this is a very good book about a very unpleasant war that receives scant attention in the United States. If a reader is willing to give the book a chance, he will find rewards there that will make the effort worthwhile.

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**THE TEAM: AUSTRALIAN ARMY ADVISERS IN VIETNAM, 1962-1972.** By Ian McNeill (Hippocrene Books, 1984. 534 Pages. \$40.00). Reviewed by Colonel James B. Motley, United States Army Retired.

Ian McNeill served as an infantry officer in Vietnam with the Australian Army Training Team Vietnam (AATTV) from 1965 to 1966. When he retired from active service in 1982 he was appointed as a senior research officer, combat operations, in the Australian Official History Unit. This book, therefore, was written as part of McNeill's official activities and is based on official records supported by personal interviews conducted by the author.

The AATTV, operational for a little more than 10 years, was both an elite and a unique unit. Its members were specially selected, and it reached a total strength of 200 before its withdrawal in December

1972. For its size, the Team was one of the most highly decorated units in Australian Army history. Working individually and in small groups, the Team's members operated with the South Vietnamese Army, the South Vietnamese territorial forces, and the U.S. Army's Special Forces detachments, and also in programs sponsored by the U.S. Central Intelligence Agency.

Given the renewed interest in the Vietnam War, the book is both timely and informative. Extensive chapter endnotes provide valuable source data for the serious researcher, while the appendixes contain detailed information on those events that directly involved Australia or the Australians in Vietnam.

For many Americans, the book will rekindle memories, both good and bad. It not only relates stories of heroism and sacrifice, but also tells of the bonds of friendship that developed between U.S. and Australian advisers and of the clashes between them regarding the different approaches to counterinsurgency operations and how these differences were exacerbated under the stress of battle.

This is a highly recommended book that is well worth its cost for the professional military man and for the military historian.

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**LEADERSHIP ON THE FUTURE BATTLEFIELD.** Edited by James G. Hunt and John D. Blair (Pergamon Press, 1985. 349 Pages. \$30.00). Reviewed by Colonel George G. Eddy, United States Army Retired.

This book, prepared by two members of the faculty of Texas Tech University, draws together the comments of 21 participants who took part in a 1983 leadership symposium on the implications of AirLand Battle 2000 and ARMY 21. The symposium, with participants from both academia and the Army, was supported by the Army's Institute for Behavioral and Social Sciences. It focuses on four key themes: a systems-wide perspective, an examination of the fundamental assumptions about the future battlefield environment, an organizational design, and the development of leaders at the top and bottom levels of the Army who have the capacity to deal on the spur of the mo-

ment with the high intensity stress, chaos, and lethality of the anticipated complex and extended battlefield.

The participants concurred that the future battlefield will so violently disrupt communications and control that an extreme and unprecedented stress over prolonged periods of combat will engulf all units. Consequently, they contend, units will be so dispersed over large areas and so frequently isolated that their commanders must be able to function extensively on their own rapid interpretations and judgments. Increasingly, senior commanders will have to rely on their juniors to make good decisions under the worst possible conditions, decisions not verified or reinforced by their superiors.

The implications for the selection and training of senior and subordinate leaders—officers and noncommissioned officers—and their units, and how these units function in peacetime circumstances, are vast indeed. The requirement to cast these new perspectives and leadership roles in the context of the "new" realism is considered most urgent.

Since the current Army structure and methods are not suited to this vision of the future, the editors are convinced that major realignments from top to bottom of attitudes, habits, organizational designs, and operations, strategical as well as tactical, will be imperative. Clearly, in their view, the Army must shift from a basically mechanistic organizational alignment and from the operation methods embodied in it to a more fluid, dynamic, and organic setup. As they view the future and review the research on leadership and current leadership practices and beliefs, the editors conclude with a proposed research approach they believe will facilitate such a transformation. I believe they have something worthy of attention.

Even if the scenarios inherent in AirLand Battle 2000 do not occur essentially as envisioned, it should be clear to all reasonably informed and serious thinkers about the Army and its leadership needs that there must be greater emphasis on more flexibility and latitude for decision making at the lowest command levels. Obviously, this involves a far greater tolerance for risk at the senior levels than presently exists. It also in-



cludes a much more thorough and sensible screening and selection, and a subsequent nurturing, of those for leadership positions.

---

**KENNEDY IN VIETNAM.** By William J. Rust (Charles Scribner's Sons, 1985. 252 Pages. \$15.95). Reviewed by Doctor Joe P. Dunn, Converse College.

Despite the crucial importance of the Kennedy years in the evolution of the American commitment in Vietnam, few books have concentrated on the policy and decision makers during those years. Although several good surveys have treated the period, few have focused intensively on the Kennedy administration's actions since David Halberstam's 1969 classic *The Best and the Brightest*.

William Rust's fine book is the result of research undertaken for a proposed multi-volume Vietnam history by the book division of the *U.S. News and World Report*. When the book division was abolished, Rust, its managing editor, used the amassed material to put together this volume. He draws upon many recently declassified documents from White House, State Department, CIA, Pentagon, and Kennedy Library files, and augments them with extensive interviews with more than 20 key participants.

While the book breaks little new

ground, it adds considerable detail and perspective to earlier accounts. The interviews are a particularly valuable source, but the volume's most important contributions are its depiction of the controversy and division within the Kennedy administration and its treatment of the U.S. involvement in the coup against Diem. It clearly establishes how the U.S. attempt to distance itself from the plotting, in which we were actually quite involved, contributed to the deaths of the Ngo brothers.

This solidly researched and exceptionally well written book is a significant contribution to the vast and still growing library on the Vietnam war.

---

**ELITE FIGHTING UNITS.** By David Ashel (Arco, 1984. 209 Pages. \$19.95). Reviewed by Leroy Thompson, Mapleville, Missouri.

This book purports to be a history of the world's elite military units in existence from World War II to the present. It is, at best, episodic and superficial in its coverage of most units.

The large amount of space devoted to Israeli parachute units, frogmen, Golanis, and anti-terrorist units constitutes the best coverage available in English on Israel's competent and experienced special mission forces. But this relatively comprehensive coverage results in

superficial coverage of many of the world's other elite units. Contributing to the book's failings is the shallow level of research carried out on those sections not devoted to Israel.

On the positive side—along with the information on the Israeli units—are the numerous photographs, many of which are in color. Unfortunately, because of its weaknesses, it is not a solid reference book, but it can be used with caution by any reader interested in finding out more about the world's elite units.

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**DELIVERANCE AT LOS BANOS.** By Anthony Arthur (St. Martin's Press, 1985. 287 Pages. \$16.95). Reviewed by Captain F. R. Hayse, United States Army.

On 4 February 1945, a top secret message from General Douglas MacArthur's headquarters instructed the 11th Airborne Division commander in the Philippines, Major General Joseph Swing, to prepare plans immediately to use part of the division to liberate an estimated 2,200 civilian men, women, and children from a Japanese prison camp in the town of Los Banos.

General Swing had never heard of Los Banos, but his map showed him it was some 40 miles below Manila on the southern shore of Lake Laguna de Bay, an area still controlled by the Japanese.



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Swing could not respond immediately because of his division's recent jump onto Tagaytay Ridge and its commitment to crack the Genko Line on the outskirts of Manila. He was granted a delay on the condition that he was to liberate the prisoners as soon as it was possible for him to disengage a force of sufficient size to accomplish the mission.

With the aid of Filipino guerrilla fighters and a recently escaped American civilian engineer, the division drew up a plan for liberating Los Banos that was executed flawlessly on 23 February 1945, the same day Richard Wheeler's unit was raising the U.S. flag on Mount Suribachi. The division's plan and its execution have since become models for large-scale prison raids.

The author gives a detailed account of this masterpiece raid from both the prisoners' and the raiders' point of view in a narrative that is historically fascinating and enjoyable reading. For those who have never experienced such an action, this book allows a "peek" through the window of history to see what is required for a unit to successfully perform one of the Army's basic combat missions.

**A SPECIAL VALOR: THE U.S. MARINES AND THE PACIFIC WAR.** By Richard Wheeler (Harper

and Row, 1983. \$24.95). Reviewed by Lieutenant Colonel Richard P. Dexter, United States Army.

Richard Wheeler certainly has the background and qualifications to write the story of the Marine Corps' role in the Pacific during World War II. He was seriously wounded while serving as a corporal with the 3d Platoon, Company E, 28th Marines, on Iwo Jima. His unit helped raise the U. S. flag on Mount Suribachi—both times. As a former rifleman and an accomplished writer, the author displays an empathy for the man on the front lines, whether he was in the cockpit of a Corsair or in a foxhole behind a Browning automatic rifle.

The book is actually part memoir and part history. Wheeler is not an impartial observer. But despite his Marine bias, he does manage to give at least some of the Japanese perspective on the fighting. As he admits, valor was not a Marine monopoly.

Marines will enjoy this book (despite the apparent transposition of the maps on pages 85 and 91) as Wheeler again tells of the fighting on Wake Island, Guadalcanal, Bougainville, Tarawa, Saipan, and Iwo Jima. Really, though, the readership should not be confined to Marines, for we all need to refresh ourselves periodically about the deeds of valor our predecessors performed in the

service of their country.

This book will not become a classic, but I do recommend it to those who want an easy read about some gutsy young men in a different era who displayed "a special valor" in the face of desperate circumstances.

## RECENT AND RECOMMENDED

**A HISTORY OF STRATEGIC BOMBING.** By Lee Kennett. Scribner's, 1982. 222 Pages. \$15.95.

**NEW DIRECTIONS IN STRATEGIC THINKING.** Edited by Robert O'Neill and D.M. Horner. Allen and Unwin, 1981. 318 Pages. \$28.50.

**MUSIC AND MUSKET: BANDS AND BANDSMEN OF THE AMERICAN CIVIL WAR.** By Kenneth Olson. Greenwood Press, 1981. 299 Pages. \$27.50.

**SOVIET STRATEGIC POWER AND DOCTRINE: THE QUEST FOR SUPERIORITY.** By Mark E. Miller. Advanced International Studies Institute, 1982. 298 Pages.

**GREAT LIVIN' IN GRUBBY TIMES.** By Don Paul. Pathfinder Publications, 1985. 135 Pages. \$12.95, Softbound.

**THE BRITISH ARMY IN NORTHERN IRELAND, 1969-PRESENT.** By Michael Dewar. Sterling, 1986. 270 Pages. \$19.95.

**WORLD MILITARY EXPENDITURES AND ARMS TRANSFERS, 1985.** Prepared by the Staff of the Defense Program and Analysis Division, U.S. Arms Control and Disarmament Agency. ACDA Publication 123. Released August 1985. 145 Pages, Softbound.

**ADVICE TO THE OFFICERS OF THE BRITISH ARMY, WITH THE ADDITION OF SOME HINTS TO THE DRUMMER AND PRIVATE SOLDIER.** Originally published in 1780. Reprint of Sixth Edition, 1783. 136 Pages. \$3.98. Available from Stuart G. Vogt, Old Chester Road, Huntington, MA 01050.

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# **From The Editor**

## **READING LIST**

The Infantry School recently published its Recommended Reading List for Faculty and Students, Number 86-1. It contains a selection of varied publications, a knowledge of which will help any Infantryman develop his own professional reading program. The list is not a definitive one, and supplements will be issued from time to time.

We have copies of the list that we will be happy to send free of charge to any of our readers who would like one. Requests should be addressed to the Editor, INFANTRY Magazine, P.O. Box 2005, Fort Benning, GA 31905-0605; our telephone numbers are AUTOVON 835-2350 or 784-4951, or commercial (404) 545-2350, 544-4951, and 687-2841.

## **WRITING FOR PUBLICATION**

We urge all of our readers, and Infantrymen everywhere, to consider writing articles for publication in INFANTRY.

In 1985, we received 162 manuscripts and gave each one a thorough going-over.

We would like to see even more manuscripts. If you have an idea you think might be developed into an article, please call us about it, or drop us a note. If you want one of our Writer's Guides, we will be happy to send you one free of charge. And if we can help you in any way with an article — even one you plan to submit to another service school journal — please let us know.

Finally, if you should visit Fort Benning for any reason, look us up. We are in Building 1827 (the "Re-up" building near the Burger King) and would be pleased to show you our operation.

## **COMING UP IN INFANTRY**

**"The COHORT Light Infantry Battalion," by Captain Harold E. Raugh, Jr.**

**"COHORT Company Reception," by Lieutenant Michael C. Cloy**

**"The Soviet BTR-80," by Captain George T. Norris.**



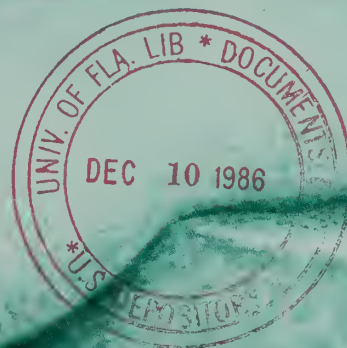


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One continues to learn about war by practicing war. (*General George S. Patton, Jr.*)





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CSM William J. Roland

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# Commandant's NOTE



**Major General Edwin H. Burba, Jr.**  
Chief of Infantry

## NTC ASSAULT TECHNIQUES

One of the most disheartening trends being reported from the National Training Center at Fort Irwin is the tendency of units to lose battles in the final stages of the attack—in the last 400 meters. Since the close-in defeat of the enemy is traditionally an infantry mission, this problem is naturally generating considerable interest and discussion at the Infantry School. It is a problem that is still being examined and studied.

My remarks here are not the final answer, but rather an interim report—some thoughts about what causes the problem and what can be, and is being, done to overcome it.

Realizing that most of you are generally familiar with the NTC training environment, here is my assessment of what attacking units face at the NTC. Simply stated, they face an OPFOR defense organized to defeat a tank/mechanized infantry attacker in general, and the tank in particular. Patterned on Soviet defensive techniques, OPFOR defense tactics at the NTC are sophisticated techniques developed from World War II battle experience on the open steppes of Russia, where the main offensive threat was the tank. It is a defense built around major antiarmor systems, with dismounted infantry and obstacles positioned to protect the antiarmor weapons or to push the attacker into "fire sacks." The antiarmor weapons themselves are dispersed and positioned in depth to allow for flank shots and for rapid displacement to supplementary positions. "Keyhole," "valley floor," reverse slope, and other practical positioning techniques are used to promote survivability and effectiveness.

Several conclusions can be drawn from unsuccessful attacks against this defense:

- Crew-served antiarmor systems (BMPs and, in particular, tanks) represent the greatest danger. Handheld antiarmor weapons do little killing.
- Few defending antiarmor systems are destroyed by the attacking unit. Failure to suppress, fix, and destroy with supporting fire,

and to maneuver attacking elements so that they can acquire and engage OPFOR systems makes the attacker a moving but passive target.

- Units are assaulting their objectives piecemeal. This is especially true when the attacker is exposed to converging fires from multiple directions, and from reverse slope or second echelon positions.
- Most of the attacker's tank and infantry carrier losses occur within 500 meters of his assigned objectives. A high percentage of these losses come from flanking fires.
- Encountering an unexpected close-in obstacle during a mounted attack is normally fatal. Such obstacles usually push the attacker into fire sacks where he is exposed to massed fires from multiple directions.
- Target fixation on the assigned terrain objective and orientation in the direction of movement often prevent acquisition of enemy to the flanks. Again, a high percentage of the losses are inflicted by flanking OPFOR fires, and from fires covering the objective but not on it.

Successful attacks, on the other hand, almost always have seven common denominators: good reconnaissance, mass, killing fires by the attacker, relentless all-round security, effective use of dismounted infantry, neutralization of obstacles before the attack, and rehearsals of key tasks. In addition, it is critical to have effective indirect supporting fires fix and/or suppress enemy forces and to use smoke to obscure his direct fire weapons. An analysis of these factors leads to some conceptual conclusions.

First, reconnaissance is vital. The attacker must find the enemy's antiarmor systems and especially his obstacles in time to react. This reconnaissance must include aggressive patrolling and probing before the attack. It must also include all-round security, target acquisition by all members of the team, including Army aviation, use of OPs and overwatch, and other actions to find the enemy and provide securi-



ty during the attack.

Units should concentrate on defeating antiarmor weapons, because these are the keys to the enemy's defense. At present, there is a tendency to orient on dismounted infantry positions. Such statements as "The assault is the culmination of the attack," if they refer to an assault against defending dismounted infantry, probably put the emphasis on the wrong part of the enemy's defensive system. Indeed, the assault of exposed terrain objectives without the defeat, or at least the neutralization, of the defender's antiarmor systems is probably the primary reason an assault fails.

Most attacks at battalion level should be oriented on the enemy rather than on the terrain. We cannot seize terrain unless we first defeat the enemy's antiarmor weapons; once we defeat those weapons the seizure of terrain is relatively simple. This does not mean that a battalion's plan should exclude attacking a defended position. Often, because defending infantry is used to "shield" enemy weaknesses, the rapid seizure of such a position can produce potential advantages. It does mean, however, that the seizure of that position must be part of an overall concept in which the defeat of the enemy is the ultimate objective.

It follows then that a primary concern for the attacker is the destruction of the enemy's antiarmor weapons. Even if it is temporarily neutralized, an antiarmor weapon left undestroyed can be maneuvered against the flank or rear of the attacker or can hit the elements that follow. This destruction does not necessarily require an assault—it is frequently possible to maneuver one's own antiarmor systems into position to destroy OPFOR antiarmor systems by fire without physically assaulting them. An important aspect of destroying enemy antiarmor systems is the contribution of artillery. Against stationary, located systems, DP/ICM fires can destroy as well as accomplish lesser levels of suppression.

The discussion in Field Manual 100-5 of "haste" versus "speed" is valid, but it is not universally understood. If a unit moves into an assault before it has made an effective reconnaissance to locate obstacles and enemy antiarmor weapons, and before its supporting fires are arranged for and coordinated, its attack will be slow and the unit will probably be defeated even if the enemy's defense has been hastily prepared.

Another aspect of speed is the tempo of the attack. Trying to attack at a greater speed than supporting indirect fires and overwatch/support-by-fire elements can shift forward, or faster than the mutual support within the assaulting force can be maintained, leads to a piecemeal attack. This does not argue for a "creeping" attack, which gives the enemy a chance to reposition and adjust, but it does show that the need for speed must always be balanced against the need for synchronization and mass.

No defense can defeat all threats. Although antiarmor weapons can be dispersed laterally and in depth to make the most of their ability to defeat an armored attacker, the very positioning of those weapons makes it difficult to defend them against dismounted attack and to block a dismounted attacker. In other words, the nature of an antiarmor defense opens opportunities for dismounted maneuver.

The acceptance of these concepts sparks a reconsideration of the contributions of infantry to the attack. Clearly, infantry contributes within the framework of a combined arms effort. Its roles and functions must be viewed in terms of a broad concept; that these contributions are critical has been proven by experience in what could be mistakenly defined as "tank terrain" at the NTC.

Translating the lessons learned from the NTC is simple. Infantry, in conjunction with scouts, can provide the eyes to find and target the enemy. In a tank/mechanized infantry task force the firepower

contributions of dismounted infantry units may be small in terms of volume, but these units have a tremendous capacity to direct the fires of artillery, mortars, attack helicopters, tanks, TOWs, and, in Bradley units, 25mm fires onto the enemy. This may compensate for any difficulty in acquiring camouflaged, well-sited enemy systems. The circumstances in which dismounted infantry can provide this support are numerous.

Initially, infantry patrols can penetrate to find the enemy and identify his strengths and weaknesses. They can find and secure approaches and key terrain so that heavier elements can maneuver into positions from which they can fire on the enemy. Infantry and engineers can neutralize enemy obstacles by breaching them or by finding tactically viable bypass routes around them. Infantry can also target enemy for indirect fires.

During movement, infantry observation posts can monitor the reactions of the enemy and direct supporting fires against him. Infantry units following tanks in mounted formations, or from overwatch positions, can provide target acquisition capabilities, and security as well. During the assault and seizure of key terrain, dismounted infantry can lead, finding and pointing out the enemy and directing fires against him. During halts and reorganizations, infantry can establish security for the force.

Infantrymen can also act as hunters and flushers. Infiltrating through gaps in the enemy's defense that only dismounted infantry can find and use, foot soldiers can bypass enemy infantry and, using Dragons and LAWs, stalk and destroy antiarmor systems that are positioned to defeat a mounted attack. When attacking infantry is covered by friendly antiarmor systems, enemy antiarmor systems will face a dilemma—they can stay and be destroyed by the friendly infantry, or they can withdraw and be destroyed by the overwatching fires from tanks, TOWs, or attack helicopters. Most frequently, they choose to withdraw. For this reason, most enemy armor kills at the NTC are attributed to tanks and TOWs. These kills would not have occurred, however, without the kills that were achieved by manportable antitank systems that forced the enemy to move. That's why the Dragon replacement is the Infantry School's number one combat developments priority.

Infantry can thus seize key terrain, eliminate obstacles, and find and secure indirect approaches to allow a battalion to move forward. It seems ironic that the most tactically mobile element at the NTC is often dismounted infantry.

An item that I have not discussed here is the mechanics of assaulting—not because that aspect is unimportant but because of space limitations and because the conditions that must be created to allow an assault are fundamental issues that needed to be addressed at length. There is, however, one key aspect that I would like to bring out in this regard. The assault must be a combined arms operation. Tanks, Bradleys, mortars, and artillery provide the volume of firepower needed for an assault. Dismounted infantry, normally leading, provides security and eyes for these systems. This does not mean that all tanks should be tied to this role, but it does mean that infantry, tanks, and artillery must work closely together. A common mistake is to allow too great a separation between tanks and infantry, which leads to a loss of synchronization.

Although some of these ideas may seem to be shifts from "conventional" thought on the subject, they actually represent no change from our well established doctrinal principles. Instead, they result from an application of those principles to the terrain, to the enemy, and to the organization for combat. I believe they have broad application in the mid- to high-intensity battlefield. They are the ones we intend to continue examining.



# INFANTRY LETTERS



## MARKSMANSHIP

In response to Edward Pascucci's letter on marksmanship (INFANTRY, July-August 1986, page 4), the Marines have a good marksmanship program, and so does the Army. No one should ever try to compare the two programs. Marines fire only at known distance targets, and the Army's soldiers fire at known distance targets plus timed pop-up targets. The advantage of the known distance range is that it provides the soldier with an immediate round-for-round feedback. A distinct disadvantage is that it also gives the soldier an unrealistic time lag in which to fire his weapon.

I agree that the fundamentals of marksmanship are the same whether you fire at known distance or pop-up targets. But in each of these categories, training to a standard will result in a skill.

Presently, the initial entry soldier receives 20 hours of instruction in dry fire techniques and rifle marksmanship fundamentals before he goes to a live fire range. If you add the reinforcement done at the unit level, these figures could increase from 30 to 35 hours. And this is only the beginning of a soldier's basic rifle marksmanship instruction, which he receives during a period of 10 days. This instruction fully prepares him to successfully negotiate combat record fire. Record fire tests the soldier's ability to detect and engage timed single and multiple target exposures at ranges from 50 to 300 meters.

On the other hand, the ROTC advanced camp is not equivalent to basic training. It is conducted at the end of four years of ROTC training or the equivalent. The writer of the letter should not judge the Army's marksmanship solely on the basis of his ROTC experience at Fort Bragg.

An infantry soldier improves his marksmanship by attending four days of advanced rifle marksmanship instruction.

This instruction consists of known distance training, moving targets, quick fire techniques, automatic fire, and night fire.

WALTER A. ALEMANY  
CPT, Infantry  
Fort Benning, Georgia

## AGREES ON SYMBOLS

I am in total agreement with Lieutenant Van R. Dodd concerning the need for symbols to reflect the uniqueness of the light infantry (see letter, July-August 1986, page 5). As a member of the newly formed 29th Infantry Division (Light), I have been fortunate enough to complete the Light Leader Course and serve this year as an instructor in the light leader program. As a result of this involvement, I can attest to the need for a symbol, or symbols, to establish the light infantry divisions as elite.

The change from straight infantry to light infantry has presented a remarkable challenge to the soldier. Could he adapt to the small-unit concept that places the responsibility on the squad to perform critical missions? Could the squad leaders and team leaders develop their combat skills to an even finer point? Could the soldier forget the "old" days of digging into a defensive position and staying there for days at a time? Could that same soldier be motivated enough by this new concept of "light infantry" to toughen himself even more physically and men-

tally? Clearly times have changed for the footsoldier, and that change needs to be recognized and symbolized.

Our soldiers need accoutrements on their uniforms that say, "We are Light Infantry." With pride in one's self comes pride in one's unit. A soldier could not help poking his chest out a little farther if he were wearing the tab of a light infantryman and the beret to symbolize his division.

A tab would be simple to design. A beret is already designed; we just need the color. Brown or tan would be excellent choices, but infantry blue could even be considered. Whatever the choice, I urge the Army to recognize us for what we are—the new and elite "Light Infantry."

LARRY W. STEGALL  
SSG, Infantry  
Radford, Virginia

## ESPRIT-BUILDING

In response to Lieutenant Van R. Dodd's letter in your July-August 1986 issue (page 5), I would like to offer the following comments concerning esprit-building uniform items for light infantry units.

First, while the increased attention and emphasis now being placed on light infantry is a welcome change, the fact of the matter is that light infantry is now being challenged and required to do what it should have been doing all along. The "commitment, desire and willingness to fight and win" that Lieutenant Dodd describes is encouraging but validated so far only by training exercises and the loud remonstrations of light infantry enthusiasts who now feel that they, too, should be recognized as an elite force. Perhaps so, but if that's true, then fully one-third of our active force (Special Operations, Airborne, Air Assault, and Light Infan-

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try units) is elite—a preposterous notion.

In the bad, post-Vietnam days of the 1970s, almost every kind of unit had its own distinctive headgear, belt buckle, footwear, and so on. Apart from looking like so many marching bands, the only tangible result was the devaluation of the genuine esprit and morale of traditionally “special” units such as the Special Forces. In fact, the elimination of this widespread abuse was welcomed by many airborne soldiers who felt that any boost engendered by wearing the maroon beret was overwhelmed by the bewildering array of multicolored hats that characterized the force at that time.

Today’s light infantry forces are undeniably better, and we would all do well to remember that it is the nameless, faceless grunt who wins wars, not the high-speed headline-gathering “elite forces” who now wear the berets and tabs that signify special status.

But there is a distinction between the soldier who volunteers and is selected for duty in airborne units and the soldier who is ordered to the “regular” combat units in the force. Romanticism should not cause us to overlook the fact that light infantry units do not have a forced entry capability, or that units such as the 101st and the 82d Airborne can be every bit as light as the 7th Infantry Division (Light) with the simple expedient of leaving behind heavy vehicles and equipment—as happened during Operation Urgent Fury.

In short, there is no evidence at all that the creation of light infantry divisions has in any way given us a capability that did not already exist. These units are simply being required to train and fight tougher and leaner than before.

So let us be content with what we are, without necessarily looking to external symbols to bolster what should be inner confidence and fighting spirit. Symbols are important, but much less so than the traditional values of hard work, teamwork, and motivation. It is the leader’s job to develop these—not the quartermaster’s.

R.D. HOOKER, JR.

CPT, Infantry

Fort Rucker, Alabama

## ABSURD

In the July-August 1986 issue of *INFANTRY* (page 5), there is a letter on the need for symbols. Frankly, the idea that a light division should receive some sort of distinctive clothing such as a beret or a tab is absolutely absurd. A light division is merely an infantry unit—no more, no less. Its soldiers do not jump out of planes or practice the true art of counterinsurgency warfare. Out light units “hump” more and get to train in a few more challenging environments. The light divisions can send soldiers to Airborne and Ranger school. They also get all that wonderful highspeed gear at CIF.

I would like to express my view on some soldiers who really deserve to wear some type of distinctive badge.

As a Bradley platoon leader in the 1st Cavalry Division and a former enlisted soldier in the 82d Airborne Division, I have trained in various courses—Airborne, Ranger, Jungle, Mortar Platoon, and Bradley. I have experience in the desert, the jungle, and the mountains. It has all been great training. But when the M2 lowers its ramp, my dismounted soldiers fight like 11Bs. In fact, many were 11Bs before new equipment training and the Bradley transition.

The Bradley is a lethal piece of machinery. We train the basic infantrymen how to maneuver, operate, and fight a sophisticated weapon system. We also demand that he take the EIB test, maintain high levels of proficiency with the M16, M203, M60, Dragon, LAW, and the rest. Our soldiers practice individual movement techniques and every other “light” drill. Now add to that the Bradley Gunner’s Skill Test, gunnery, company-team live fires, air assaults, and any other infantry tactic you can think of, and the life of an 11M is easier to understand.

Doctrine demands that the 11M fight as efficiently as any other infantryman. A review of any skill manual for 11M shows not just Bradley skills but basic and advanced infantry skills as well. If the “balloon went up” tomorrow, the 11M could fight like any 11B, but could the light division soldier crawl into the turret of an M2 and kill the enemy?

Training a COHORT unit cannot be that difficult. At least the men have a

basic foundation upon which to work. My idea of a tough job is guiding a brand new Division 86 task force, recently equipped with Bradleys, through new equipment training in January, a company-team test (with M1 tank companies) in April, ARTEPs in May and June, gunnery, then the National Training Center in July of the same year. We had to train soldiers of all ranks from private through lieutenant colonel. Our unit spent so much time in the field, we simply created motor pools at designated assembly areas and returned to garrison for breaks of three or four days. Then we headed back out to train again. That was a trying period for all the soldiers and their families, but we prevailed.

My compliments to our brothers in arms in the 7th, 25th, and 10th Divisions. I wish you all great success. But if you want to recognize any soldier with a badge of distinction for his efforts and all-round guts, then tip your hat to the 11M.

ROBERT S. BOBINSKI

LT, Infantry

Fort Hood, Texas

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## UPGRADE M113 UNITS

Bravo for Sergeant Foley! In his article in the July-August 1986 issue of *INFANTRY*, he made some astute observations on the capabilities and limitations of M113-equipped mechanized infantry. (See “Observations on Mechanized Infantry,” by Sergeant First Class John E. Foley, pages 29-34.) I completely agree with his common-sense, low-cost improvements especially for upgraded carrier weapons and the dismounted platoon.

I spent three years as a brigade S-4 in Europe; during my tour our brigade converted to the J-series MTOE and transitioned to the M1 and the M2/M3. The Bradley is a fine fighting vehicle, but not all mechanized battalions will receive Bradleys. It is time, in light of reduced budgets, for the infantry community to give serious thought to cheap and readily attainable improvements, especially in firepower, for M113 units. The technology is either here or being worked on.

I agree with Sergeant Foley’s idea for a platoon mortar. A carrier-mounted

60mm mortar, fired by direct lay or direct alignment, is ideal for reconnaissance by fire, immediate suppression, and smoke, as well as for illumination.

Branching out a bit—is anybody at Fort Benning looking at the *operational* employment of M113 units as “regular” infantry along the lines suggested by Colonel Huba Wass de Czege in “Three Kinds of Infantry”? (See July-August 1985, page 11.) Neither Bradley battalions nor those in the new light infantry divisions are really suitable for the hard slugging required to attack well-entrenched enemy or defend a battle position in depth. Bradley battalions, although long on firepower, are short on dismounted infantrymen; light battalions don’t have the firepower or the sustainability needed. I fully realize that light infantry prefers to attack the enemy’s weak spots, but sometimes you can’t find a weak spot to attack.

Finally, I haven’t read anything recently about the concepts and equipment being tested by the 9th Infantry Division at Fort Lewis. The motorized concept, previously so full of promise, seems to have died on the vine. A motorized division appears to be an excellent compromise between transportability and firepower. I also see no reason why it could not be tailored for use in a low-intensity war.

PAUL L. CONWAY  
MAJ, Infantry  
Durant, Oklahoma

## REORGANIZING

I would like to make two comments on General Wayne Downing’s excellent and thought provoking article “Reorganizing” (INFANTRY, March-April 1986, page 22).

First, in Table 2 it appears that the numbers for the light infantry platoon headquarters with a field strength of 22 or more and the lesser strengths are incorrect. To be consistent with the text and the structure of the argument, instead of four in each case, the number should be seven. As the argument goes, a viable platoon needs a maneuver group and a base of fire. The light infantry base of fire would be two 2-man machinegun

teams located in a light infantry platoon’s headquarters along with the platoon leader, the platoon sergeant, and a radio-telephone operator, a total of seven men. This would be consistent with the platoon total in the table’s final column.

In general, the article does not deal with the problem of reorganizing on the basis of the soldiers’ capabilities. Not all of the soldiers available can or should be moved into certain positions that become vacant. A platoon leader will have to know which men can serve in which capacities, not just what jobs have to be filled first.

Also, the heavy platoon leader will have to think in advance about redistributing soldiers, and about their unique talents, after the loss of a vehicle. A platoon’s capabilities will be greatly affected by a vehicle loss.

Overall, the article was very informative, and I hope my comments will be taken not as criticism but as an addition to it.

STEVEN MINNIEAR  
Washington, D.C.

## INFANTRY IMAGES

Let’s talk for a moment about the sacred image of the Infantry. You know the one: You wouldn’t introduce either your sister or your daughter to an Infantryman. He prefers field duty when the weather is (at the very least) uncooperative. He wallows in the mud—and loves it. He lends atmosphere to what otherwise might be a stuffy affair.

That image isn’t really a problem. After all, the Infantryman is the guy on the ground with the gun. And the Infantry is the first in and last out. Not only that, but the Infantry is proud of that sacred image. Infantrymen everywhere climb proudly on that bandwagon—and just as proudly reduce it to splinters.

There’s a serious side to that image. Some people say we Infantrymen can survive with so little for so long that we can do anything with nothing. Those people point to Sherman’s march to the sea, the Third Army’s race across Europe, and any number of other instances to show that Infantrymen are masters of the

“make do”—all the time. To our credit, we have proved them right over and over again—effectively, efficiently, and constantly.

But it’s time for a change. It’s all well and good to be pigs in the mud, but we must learn to leave the field in the field. When we come back to civilization, we need to come all the way back—to baths, clothes and, yes, even deodorant. There’s another side to that, too. The Infantry, as a branch, needs to try hard to *stop* doing everything with nothing. The Infantry needs to demand its fair share and the same respect the other branches seem to get.

In the field it’s fine to make do with what we’ve got and to take a certain pride in doing without. But not in garrison. Not on the installation.

The Infantry must demonstrate that it is no longer willing to get by with less than the best in terms of facilities and posts, camps and stations. We must look at ourselves and our sacred image and demand the best. After all, we *are* the best.

DOUGLAS A. MARTZ  
MAJ, Infantry  
Fort Sheridan, Illinois

## ALOC, ALC, ALCC?

Lieutenant Colonel Joel D. Williamson’s interesting article “Command and Control” (INFANTRY, May-June 1986, pp. 25-29) contains a minor discrepancy. He uses the acronym ALOC for the term “administrative logistics operations center,” and this is incorrect.

The glossaries of FM 100-10, Combat Service Support, and FM 63-2-2, Combat Service Support: Armored, Mechanized, and Motorized Divisions, both list ALOC as “air line of communication.” Unfortunately, the glossary of FC 17-1J, The Tank and Mechanized Infantry Company Team (coordinating draft), does list ALOC as “administrative logistics operations center.” But then, drafts are for the purpose of eliminating such little problems. The correct acronym is ALC, for “administrative/logistics center.”

Acronyms are supposed to make communication easier. Considering the num-



ber existing and our penchant for coining new ones, it is clear why many of our brightest second lieutenants are often confused. Now let them beware the ALCC!

**WILLIAM G. KEYES**  
LTC, USA, Retired  
Fort McClellan, Alabama

## ONLY A GRUNT?

I once had a soldier complain to me that he was tired of being "only a grunt" and that he wanted a more important job. He was somewhat surprised when I explained to him why there could never be a more important job than that of the infantryman.

If it is true that the noncommissioned officer corps is the backbone of the Army, then it certainly follows that the rifleman is the Army's lifeblood. After all, it is the rifleman to whom falls the ultimate challenge: Defeat the enemy on a man-to-man basis and secure victory by bullet and bayonet.

In the heat of the jungle the infantryman often forgets that his job is considered so important that millions of dollars worth of men and equipment are kept standing by to support him in his mission. It is the grunt who leads the way for armor, artillery, and others to follow.

When the rifleman is crawling through the mud or standing guard in the rain, all efforts are directed toward his success. From the aircraft crews that provide him with supplies or close air support to the rear echelon troops funneling food, cloth-

ing, and ammunition to his jungle outpost, countless people recognize that his mission has the priority.

No, there is no more important job than that of the grunt. There is also no greater feeling of pride than to hear yourself called "Infantryman."

**CHUCK GRIST**  
SSG, Infantry  
Casselberry, Florida

## VIETNAM BOOK

With the great help of the hundreds of veterans I've interviewed, I've sold three books on the Vietnam War. I'm now starting a fourth proposed book involving the following: The actions from 29 March to 1 April 1970 when the 2d Squadron, 7th Cavalry was attacked in its LZ, the 2d Squadron, 8th Cavalry was overrun at LZ Illingworth, and the CG, 199th Infantry Brigade was killed; and the 1 May to 30 June 1970 incursion into Cambodia by elements of the 4th, 9th, and 25th Infantry Divisions, 1st Air Cavalry Division, 101st Airborne Division, 11th Armored Cavalry Regiment, and 199th Infantry Brigade.

Veterans, please call me or write any time to arrange interviews: 220 Kingsville Court, Webster Groves, MO 63119; telephone (314) 961-7577.

**KEITH WILLIAM NOLAN**

## HISTORICAL SCROLL

Last year the Devonshire and Dorset

Regiment celebrated its 300th Anniversary and, in connection with this celebration, produced several items. One of these items is a handsome horizontal format wall poster (43 inches by 18 inches), which we call our Historical Scroll. It depicts in color the uniforms the regiment has worn from the time of our founding in 1685 up to now.

It occurs to us that there may well be other people with general military or army historical interests who might like a chance to buy this unique item. The price is four pounds sterling (remittance in sterling please), which includes a protective tube and surface mail.

**PETER BURDICK**  
LTC, British Army  
Tercentenary Project Officer  
The Devonshire and Dorset Regiment  
Wyvern Barracks, Exeter  
ENGLAND

## LOOKING FOR SEABEES

An all-out search is under way for about 400 men who served their country well in the 46th Naval Construction Battalion (Seabee) during World War II. About 600 of the 1,012 members who were stationed in Guadalcanal, New Caledonia, and New Guinea have been located.

Anyone with information concerning the whereabouts of a member of this battalion is urged to contact Mary Holliway at 1833 NW 11, Oklahoma City, OK 73106.

**GAIL PECK**  
Oklahoma City, Oklahoma

# Don't do it!

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# INFANTRY NEWS



A MOBILE TRAINING UNIT has been organized at Fort Benning to help battalions all over the world maintain their equipment. The Maintenance Field Training Team, organized by the Maintenance Management Division of the 29th Infantry Regiment, can go just about anywhere to provide infantry commanders and other leaders with the latest maintenance concepts and trends as set by Army standards.

The team is made up of six maintenance experts who are skilled in preventive maintenance checks and services (PMCS) on vehicles and weapons, in the maintenance of Bradley fighting vehicles and weapons, and in maintenance management at battalion, brigade, and division level.

The team's primary focus is on squad leaders, platoon sergeants, and platoon leaders, because they are directly responsible for training soldiers. The five-day period of instruction for this group covers how to do PMCS properly, how to establish a training program for a unit, and how to put a sustained PMCS program in the unit. Pre-tests are conducted before the instruction so that it can be tailored to fit the level of expertise in the battalion.

The team is also qualified to teach maintenance leadership to battalion and company commanders and battalion maintenance officers. This instruction includes the function of the Army of Excellence program, how it should work, and how to manage it.

Either or both groups may receive training during a visit, depending upon a battalion's needs.

The Infantry School has provided limited funding for this project. Once these funds have been depleted, the visits will be made at the expense of the requesting unit.

Battalion commanders may request the team's services by writing Maintenance Management Division, 29th Infantry Regiment, U.S. Army Infantry School, Fort Benning, GA 31905-5910, or by calling AUTOVON 784-7214/7363/6366, or

commercial (404) 544-7214/7363/6366.

THE 75TH RANGER REGIMENT, with headquarters at Fort Benning, now carries the lineage and honors of the Ranger battalions of World War II and the Ranger companies of the Korean War.

The U.S. Army had six Ranger battalions during World War II. William O. Darby organized and led the 1st, 3d, and 4th Ranger Battalions, which served in North Africa and Italy and were known as the Ranger Force. The 2d and 5th Ranger Battalions saw action in five major campaigns in Europe after landing in Normandy on D-Day. The 6th Ranger Battalion fought in the Pacific.

During the Korean War, elements of the former Ranger battalions were reorganized as 15 separate Ranger companies, six of which served in Korea.

The Combat Arms Regimental System, implemented in the 1950s, did not include plans for reactivating any Ranger units. As a result, in order to perpetuate the outstanding history of the World War II and Korean War Rangers, they were consolidated in 1960 with the 1st Special Service Force of World War II, a joint Canadian-American organization that fought in the Aleutians, Italy, and France. Together they formed the 1st Special Forces, the parent regiment for all Special Forces Groups.

When Ranger units were activated again in 1969, the 75th Infantry became their parent regiment. It perpetuated the 5307th Composite Unit (Provisional), the famous Merrill's Marauders who operated along the Ledo Road in Burma during World War II. Thirteen companies of the 75th

Infantry fought in Vietnam, and two battalions saw action in Grenada in 1983. A regimental headquarters and a third battalion were organized in 1984.

Today's Rangers consider themselves the legitimate heirs not only of Merrill's Marauders and the Vietnam era Rangers but also of the Rangers from World War II and the Korean War. The 1st Special Operations Command therefore requested that the lineage and honors of the former Ranger units be transferred from the 1st Special Forces to the 75th Infantry.

Effective 3 February 1986, the Secretary of the Army approved that request and, at the same time, redesignated the 75th Infantry the 75th Ranger Regiment.

A REVISED Army Regulation 600-9, Army Weight Control Program, was published in October 1986. The following major changes have been incorporated into this revision:

- Measurement of body fat will be determined with a tape measure instead of with calipers. This will be performed at unit level. Before, medical personnel conducted the caliper test at medical facilities. The correlation factors are nearly identical in accuracy between these two methods.
- All measurements will be taken in PT uniform and stocking feet. The previous method of obtaining a soldier's weight was to weigh him in his duty uniform and deduct the weight of the clothing.
- There is an increased screening weight for female soldiers. The table increased by five percent for females. The table for males has not changed.
- Soldiers will be able to select a desired weight below their screening table weight to use as a guideline to keep from exceeding the weight ceiling.

A HOTLINE has been established at Anniston Army Depot in Alabama to help soldiers and units with maintenance problems on combat vehicles, small arms, and

## INFANTRY HOTLINE

To get answers to infantry-related questions or to pass on information of an immediate nature, call AUTOVON 835-7693, commercial 404/545-7693.

For lengthy questions or comments, send in writing to Commandant, U.S. Army Infantry School, ATTN: ES, Fort Benning, GA 31905.



missile guidance and control systems.

The 24-hour hotline is answered by a person on duty between 0700 and 1530 Central Standard Time. During other hours, an answering device records messages. The hotline is available seven days a week.

The depot's equipment specialists will analyze and research maintenance and repair problems and provide speedy solutions. Among the missile guidance and control system problems the depot deals with are land combat support systems, ground TOW, TOW Cobra, TOW 2, Dragon, LANCE, and Shillelagh.

The hotline should be used only after all local resources such as logistic assistance offices have been contacted.

Anyone calling the hotline should provide name, AUTOVON number, unit identification and location, and a complete description of the maintenance or operational problem.

The number is AUTOVON 694-6582 or commercial (205) 235-6582.

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**SOLDIERS GOING** to the 3d Battalion, 2d Infantry, 25th Infantry Division, may call a toll-free number for any information on their new assignments. The number is 1-800-826-0857. (There is a six-hour time difference between Hawaii and the East Coast.)

The 3d Battalion, 2d Infantry is scheduled to be redesignated the 4th Battalion, 22d Infantry (COHORT), in November.

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**A FEMALE MEMBER** of an Afghani commando brigade is pictured here in a photo from *Krasnaya Zvezda*, the official newspaper of the Soviet military establishment.

Lieutenant Nadzhiba is the medical officer for an undisclosed commando brigade. She wears the crimson beret of all Afghani special forces along with the 1st Class airborne wings bestowed upon the most proficient of Afghani paratroopers.

She asked to serve in the commando brigade and participated alongside other members of the brigade during the assault on the Zhavara citadel. The assault—a predominantly Afghani Army operation that occurred during the last week of May

1986—inflicted a serious blow on the *mujahiddin*.

Before the invasion of Afghanistan, the Afghani Ground Forces included three airborne brigades and a commando brigade, the 444th, all of which were Soviet trained. After the invasion, these forces disappeared from view, and it has been only within the past year that Afghani commandos have made their way into the Soviet press. They have been reported fighting alongside Soviet airborne and *Spetsnaz* units. Additionally, they regu-



larly provide support to Soviet combined arms reinforced battalions—core units for small unit military operations in Afghanistan.

While the number of women serving in special forces units in Afghanistan is not known, it is not believed to be significant at this time and will probably not increase much in the near future.

*(Translated and contributed by Captain Gilberto Villahermosa, Fort Bragg, North Carolina.)*

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**THE NATIONAL INFANTRY** Museum is preparing a special exhibit titled "This We Will Defend" to commemorate the bicentennial of the U.S. Constitution. Three signers of the constitution who were also military men are featured—James McHenry, Pierce Butler, and Charles Cotesworth Pinckney. Portraits of these three will be shown along with documents they signed. Eighteenth century style furnishings and military trophies of the period will be included in the exhibit.

Many interesting donations have been made to the Museum recently:

- A Kevlar helmet belonging to Lieutenant General Robert L. Wetzel, a former Fort Benning commanding general.

- A censored edition of an Ecumenical Commission prayer book that was distributed to prisoners of war by the YMCA during World War II.

- Several articles relating to Japan in World War II—a Japanese beer bottle recovered by the donor in 1982 from the Japanese ship *Shoei Maru*, which was sunk by the U.S. Navy on 19 December 1943 at Kwajalein in the Marshall Islands; a waterproof rice bag taken from a Japanese soldier on Corregidor; maps used by the 503d Regimental Combat Team at Corregidor and the Noemfoor Islands; and an "I Cease Resistance" leaflet that, ironically, was taken from a dead Japanese soldier on Mindoro. (This and similar leaflets were dropped by U.S. forces on Japanese positions in an effort to get the Japanese soldiers to surrender.)

- World War I infantry mementos including a first aid packet, a punishment card prescribing 14 days of bread and water, a 3d Infantry Day program, and several military documents, as well as a Montana peak hat that belonged to the donor's grandfather.

- A Venezuelan parachutist badge, which will be included in the large collection from many countries that is on display in the airborne section.

- Several other pieces of unit insignia as well as books, photographs, and other printed matter.

- A large bronze sculpture of Adolf Hitler's head, which had been turned upside down and converted into a trash receptacle by the donor's brother.

Other small pieces were purchased recently including a large tin Civil War coffee pot, a pair of wooden crutches bearing the Medical Department stamp, a Civil War bayonet and scabbard, a leather flag carrier, and a brass bullet mold.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who would like to join. The cost is \$2.00 for a one-year membership or \$10.00 for a lifetime membership. With these funds the Museum is able to pur-



chase specific items that are needed for planned exhibits or to build or round out its collection in certain areas as these items become available.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, GA 31905-5273, AUTOVON 835-2958, or commercial (404) 545-2958.

THE U.S. ARMY INFANTRY Board has submitted the following news items:

**SAW Modifications II.** Following the fielding of the Squad Automatic Weapon (SAW) in 1984, some using units reported problems with the weapon. After a series of high level meetings, SAW production was halted in the summer of 1985. A Joint Working Group met at Fort Benning in September 1985 and proposed a series of SAW modifications. These modifications fell into two categories—those that could be implemented within six months and those that would take longer. The modifications that could be implemented within six months were tested by the Infantry Board in December 1985. (See INFANTRY, May-June 1986, page 9.)

On the basis of the test results and other investigations, a Test Integration Working Group, chaired by the SAW Project Manager's office, agreed on a number of additional modifications designed and selected by the materiel developer, the combat developer, and the manufacturer to address the remaining problems. A technical evaluation (development testing) was conducted by the manufacturer in Belgium under the supervision of the Armament Research, Development, and Engineering Center (ARDEC), and the user testing of the SAW modifications was conducted by the Infantry Board at Fort Benning. Two designs of each of the following modified SAW components were evaluated: butt-stock, buffer assembly, gas system, barrel change handle, and a heat shield.

Twenty-four SAW gunners participated in the user test from 21 July through 28 August 1986. By the time the testing program was completed, each SAW gunner had used each configuration of modified SAW in a series of exercises involving zeroing, movement and reaction to op-

posing forces (blank firing), negotiation of an obstacle course, and live-fire engagement of hit-sensitive target arrays at ranges out to 800 meters.

Data concerning night sight compatibility and zero retention and repeatability were collected during side tests along with data on signature effects. Reliability, maintainability, human factors, general compatibility, and safety were assessed concurrently with all of the testing.

The test results will be used by the Infantry School and ARDEC to ensure that the selected modifications correct the identified deficiencies and to determine the preferred combination of modifications.

**Multipurpose Bayonet System.** The Infantry School, in conjunction with the Armament Research, Development, and Engineering Center (ARDEC), has been aggressively pursuing the acquisition of a multipurpose bayonet system (MPBS) to replace the present M7 bayonet. (See INFANTRY, January-February 1986, page 9.)

In December 1985, the letter requirement for the bayonet system, which proposed the acquisition of the bayonet under the non-developmental item (NDI) process, was approved. ARDEC fielded the MPBS Request for Proposal and Purchase Description in March 1986 and solicited candidate bayonet systems. Each was expected to function as bayonet, combat knife, field knife, and wire cutter. Six candidates were selected and furnished to the Infantry Board for testing.

Each candidate system consisted of a scabbard, a quick-release attaching and detaching device, and a bayonet. The bayonets varied in weight from .63 to 1.06 pounds and in blade length from 6.02 to 7.0 inches. Each was designed with a modified spear point and V-ground edge. The rear portion of the top edge of five of the candidates had serrations for cutting or sawing while the sixth included a saw blade in the scabbard. All systems incorporated a wire cutter of some kind in their design.

Comparative testing of the MPBS candidates was conducted in an Operational Test II at Fort Benning during the period 16 June through 16 July 1986. Twenty-eight Infantrymen from the 197th Infantry Brigade used each candidate system

during a series of exercises that were designed to obtain data on the operational performance capabilities of the MPBS when used as a bayonet, field knife, and wire cutter. The combat knife function was assessed by six instructors from the Infantry School's Ranger Department.

Operational performance data were collected from questionnaires, rating scales, interviews, and timed exercises. Comparative data on compatibility, durability, human factors, and safety were collected throughout testing.

The Infantry School will use the test results to assist in making a decision concerning the Infantry's recommended choice of an MPBS candidate for consideration by a source selection advisory committee.

**Lightweight Desert Clothing and Equipment.** In an effort to improve upon the clothing and equipment available for use in a desert environment, user representatives attending a Test Integration Working Group meeting held in July 1985 at Fort Bragg selected a number of commercially available items for testing by the Infantry Board under the concept evaluation program (CEP). Particular emphasis was placed on the selection of items used by Special Forces personnel.

Items selected for testing included three designs of one-man tents/individual shelters, three designs of two-man tents, five varieties of individual camouflage covers, two varieties of boots, two types of tactical load bearing vests, three types of hats, four designs of uniforms, two designs of water containers, and one type of scarf. Standard items of clothing and equipment were worn or used to establish a basis of comparison for all the test items except the tents and water containers, which had no control systems.

From 9 July to 24 August 1986, two Special Forces A detachments wore and used the various items during a series of exercises in a desert environment at Fort Bliss, Texas. The detachments participated in tactical ARTEP-type tasks, missions, and team training; traversed obstacles; and made parachute jumps. The uniforms and equipment were alternated so that test and control items could accumulate near-equal wear and use time.

Functional performance, compatibility, human factors, soldier preference,



durability, maintainability, and safety data were collected throughout the test. Questionnaires were administered to determine

troop preference and desired or undesired features of each type of test item.

The Infantry School will use the test re-

sults to determine the need for further testing or consideration of the various test items.

# SWAP SHOP



Using azimuth and pace count to navigate is necessary, but it cannot be totally depended upon. Following an azimuth can lead a unit through danger areas and terrain that will impede its movement.

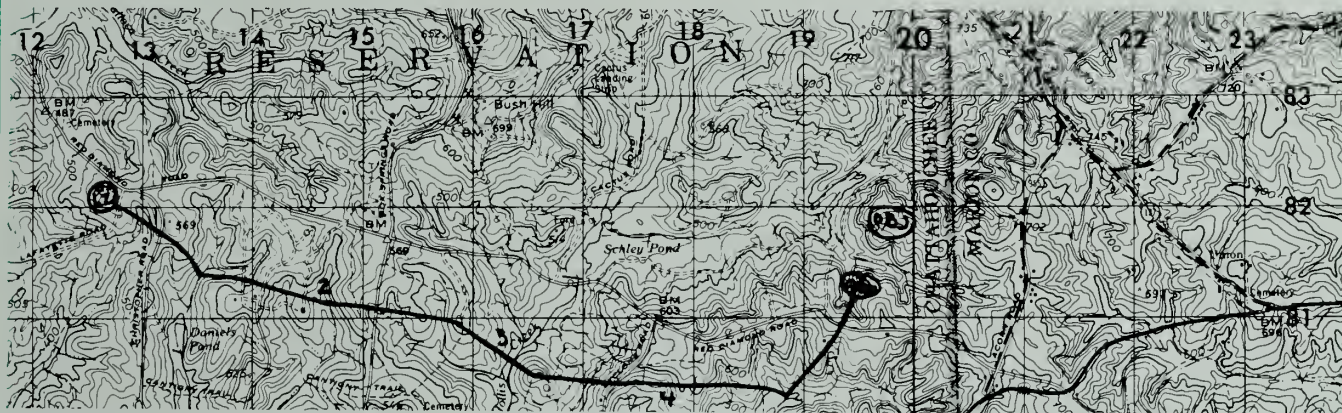
The use of a navigation sheet for planning and traversing a route will allow an infantry leader to navigate using a general azimuth along with terrain features. It will also force the user to make a thorough route analysis.

A simple format for such a sheet is shown here as an example, but more elaborate formats could include even greater detail, tailored to the general terrain.

Each leg should be numbered and should begin and end at a rec-

ognizable terrain feature. Leg One begins at the LZ and ends at a stream. The "Landmarks" column includes any intermediate landmarks and the end point of the leg. The column labeled "Slope" indicates the general slope of the ground as shown on the map. If the ground always slopes up to the left or right keeping on the azimuth will be much more difficult. But if a leader finds his right foot is higher than his left when it should be the other way around, he will know that he's off course.

The "Remarks" column should include not only the location of any danger areas but also that of any control measures such as the LZ or the ORP.



LEG	AZ	DIS	LANDMARKS	SLOPE	REMARKS/DANGER AREAS
1	125°	1000	Hill 569 to right at 600m stream at 1000m GL135814	Down Up right Down	From LZ at GL 127821 to stream Christopher Rd DA at 450m +
2	101°	2400	Up a draw, hill to left 700m draw to right 800m & 1100m, 1900m, hilltop at GL159809	Up 600m, Up & down 600m Up left 1200m	DAs: vic 141812 Box Springs Rd, 1600m
3	123°	800	Hollis Creek 500m Hilltop at GL166805	Down 500m Up 300m	DA: Hollis Creek
4	94°	2300	Draw to left 200m, draw to right at 900m & 1800m stream junction GL188803	General slope Up left, Down 200m, up 500m Up left 1600m	DA: Cyclone Rd at 750m
5	30°	1100	Up a ridge 800m down stream bed/draw 300m ORP GL194813	Up 800m Down 300m	DA: Red Diamond Rd 800m ORP at GL 194813

(Submitted by Captain Karl A. Miller of Company A, 2d Battalion, 14th Infantry, 10th Mountain Division, at Fort Benning.)



## “In Front of Them All”

MAJOR KARL W. EIKENBERRY

The United Nations Command Security Force (UNCSF), the only military unit with a continuous presence inside the Korean demilitarized zone (DMZ), is an elite infantry force whose missions are vital to the upkeep of the Korean Armistice Agreement.

Early in 1952, in anticipation of the end of the Korean War, the United Nations Command gave the Eighth United States Army certain responsibilities in connection with the establishment of the Military Armistice Commission (MAC). To comply with the overall directive, the Eighth Army commander had to establish a unit to provide security and logistical support for the MAC and other agencies engaged in executing the Armistice Agreement.

On 5 May 1952, the UNCSF — then named the United Nations Command, Military Armistice Commission Support Group (Provisional) — was organized; it had an authorized strength of five officers and ten enlisted men. The signing of the armistice in July 1953 led to a series of large-scale prisoner-of-war and refugee exchanges between the combatants. The UNCSF was expanded to 1,900 men to support these exchanges (known as Operations Big Switch, Comeback, and Rainbow), which involved the movement of more than 100,000 personnel across the military demarcation line (MDL) in the vicinity of the tiny hamlet of Panmunjom. In 1954 the Security Force was awarded the Meri-

torious Unit Citation for its outstanding performance during these politically sensitive operations.

By late 1954 the UNCSF's mission had changed to approximately its present one. Some of the details of the armistice negotiations and the eventual agreement will help explain this mission and the UNCSF's operational requirements.

A security corridor had been established in 1951 to provide some degree of safety to officials traveling to and from the armistice negotiations then being conducted next to Panmunjom. Under the terms of the armistice agreement, this corridor, now referred to as the Military Armistice Commission Head-

quarters Area (MACHA), was kept intact. The corridor's purpose was to provide safe access to personnel traveling to and from the Joint Security Area, which is now located about 600 meters from the original negotiation site. This area, about 800 meters in diameter and bisected by the Military Demarcation Line, was established as the site of the headquarters offices of the Military Armistice Commission and the Neutral Nations Supervisory Commission (NNSC). The Joint Security Area, often referred to today simply as Panmunjom, is the site of meetings between the United Nations component and the North Korean People's Army and Chi-





nese People's Volunteers Military components of the Armistice Commission as well as official talks between the two Koreas.

The NNSC is divided into the Swiss and Swedish delegations, supported by the United Nations Command, and the Czechoslovakian and Polish delegations, supported by North Korea. The United Nations Command and North Korea have established camps for these delegations within the MACHA on their respective sides of the MDL.

Not far from the Joint Security Area is Taesong Dong, or Freedom Village. Under the provisions of the armistice agreement, the residents of the Panmun Valley (in which the village of Panmunjom is located) were allowed to remain there after the cessation of hostilities, although the area is inside the DMZ. The Republic of Korea decided to move all of the families on its side of the MDL to one location, which became known as Taesong Dong. Today, the village of about 217 residents is the only inhabited locale within the DMZ. The North Korean DMZ "village," Guijong Dong, which is impressive looking but largely unoccupied, is referred to appropriately as "Propaganda Village."

The UNCSF is an Eighth United States Army unit under the operational control of the Commander-in-Chief of the United Nations Command. Its command and staff structure parallels that of an infantry battalion. The unit's as-

signed strength is 350 military personnel, 40 percent of whom are Republic of Korea soldiers. The UNCSF has two companies, the Headquarters and Service (H&S) Company and the Joint Security Force (JSF) Company.

The H&S Company performs most of the unit's support missions. In addition to the usual elements found in an infantry battalion's headquarters company, H&S Company is augmented by a number of sections that perform functions unique to the armistice agreement, such as the escort section, which provides drivers and security guards for the NNSC delegations; the Taesong Dong security platoon, which protects the residents of Freedom Village against possible North Korean incursions; and tour guide section, which briefs and escorts United Nations Command and Republic of Korea guests during their trips to Panmunjom.

The JSF Company is organized and equipped like a light infantry company, except that it has four platoons rather than three, and is fully motorized. It is responsible for securing the Joint Security Area, patrolling the UNCSF's operational area, and reacting to North Korean acts of aggression against the MAC headquarters area.

In addition to fulfilling the administrative and support requirements common to any infantry battalion, the UNCSF also provides logistical support to the Swiss and Swedish NNSC delega-

tions, briefing and escorting the 90,000 or so people who visit Panmunjom each year, and supervising the administration of Taesong Dong.

The soldiers of the UNCSF are among the best in the armies of the United States and the Republic of Korea. The U.S. soldiers are screened and nominated to serve in the unit by a unit liaison NCO who reviews the records of all personnel arriving for assignment to the Eighth United States Army. To be chosen, an infantryman generally must be at least six feet tall, be in excellent physical condition, and have a spotless military record. A Korean soldier must have a working knowledge of English and a black belt in one of the martial arts. Before being permanently assigned to the unit, each prospective UNCSF soldier must successfully complete an eight-day orientation. An American soldier serves a one-year tour of duty, while his Republic of Korea counterpart serves for two and one-half years.

The infantry training conducted by the UNCSF reflects the decentralized nature of the unit's operations. Since the squad and platoons conduct "real world" operations most of the time, tactical proficiency at the small unit level within the UNCSF is exceedingly high. In addition, all soldiers receive extensive training with the .45-caliber pistol (the weapon carried inside the Joint Security Area) and the M16 rifle, and in combatatives and Tae Kwon Do (a Korean mar-

UNCSF guards (left) stand their posts inside the JSA. In back is the North Korean building of Panmunhak. At right, UNCSF soldiers patrol the UNCSF's operational area.





tial art). The unit's consistently superb performance on the Expert Infantryman Badge test speaks for the skill of the infantrymen assigned to it.

The U.S. soldiers study the Korean language throughout their assignment with the UNCSF, while the Korean soldiers continuously work to improve their English skills.

Based at Camp Bonifas, only 400 meters south of the DMZ, the UNCSF has been involved in many engagements with North Korean forces since the end of the Korean War. The most significant of these include a North Korean attack against Camp Bonifas (then Camp Kitty Hawk) in 1967, which resulted in heavy casualties; a North Korean ambush of a

United Nations Command truck in the MACHA in 1968 during which four Security Force soldiers were killed and two wounded; and the axe murder of two Security Force officers at Panmunjom in 1976. As recently as 23 November 1984, the UNCSF countered North Korean aggression when a Soviet citizen defected at Panmunjom.

The recent North-South Korean talks and exchanges at Panmunjom and in Taesong Dong, which have been unprecedented in scope and nature, have placed unusual demands upon the UNCSF. And for its support of the historical North and South Korean Red Cross exchange of relief goods, which occurred in the wake of severe flooding in Sep-

tember 1984, the unit was awarded the humanitarian service medal.

In short, the UNCSF, as the unit deployed farthest forward in the Republic of Korea, performs missions that are essential to the maintenance of peace. The United Nations Command has therefore given the unit its motto — "In Front of Them All."

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**Major Karl W. Eikenberry**, an Infantry officer and a 1973 graduate of the United States Military Academy, recently completed an assignment as deputy commander of the UNCSF. He has served in the 2d Infantry Division; the 1st Battalion, 75th Ranger Regiment; and the 24th Infantry Division. He is now assigned as the Assistant Army Attache to the Peoples Republic of China.

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# Leaders Reaction Course

MAJOR ROBERT L. MAGINNIS

*Inside the high grey walls of the prisoner-of-war camp the sultry weather hangs around the soldiers' necks like iron weights. They have been told that two of them are to be executed later today, soon after they have completed digging the newest graves. Their only route of escape is across a wide moat circling the prison's interior and then over the high walls.*

*They have watched the guards for months, and know their routine. They also know that the slightest movement of the stagnant water in the moat will sound an alarm. The concertina wire along the inside of the prison walls is electrically charged, and the guard's catwalk is too dangerous to be used to aid an escape.*

*Nearby, the soldiers see a ladder and two ropes of different lengths. Five of them begin to formulate a plan while large brown rats scurry around the prison's recreation area.*

*The soldiers realize that loud talking and unusual movements will call attention to their plan. They also know that*

*at any moment friendly aircraft will conduct a scheduled bombing of the enemy's nearby garrison area and have decided to take advantage of the inevitable confusion caused by the bombing. Once the alarm sounds announcing the air raid, they plan to run through the moat and get over the wall as quickly as possible.*

*The friendly bombers can now be heard in the distance. One soldier signals a comrade. Cautiously, the two of them lift the ladder while one keeps the guards in view out of the corner of his eye. One of the soldiers quickly crosses the moat, as the air raid alarm sounds, the bombs burst in the garrison area and the air defense guns muffle the moat's now triggered alarm system. In a moment the soldier is perched on the ladder's top rung.*

*He finds a handhold dangerously near the wire, which is humming with its deadly electrical charge, but without a moment's hesitation he shifts his weight to that hand and then locates a hold for the other. With a burst of energy he vaults*

*and pulls himself to a position atop the wall. On the other side he finds a piece of pipe. Cautiously moving this over the wire, he is able to help his comrades over the wall. They all escape without being detected.*

This group of soldiers has just successfully completed one of the 17 challenging tasks that make up a Leaders Reaction Course (LRC), which is designed to act as a sensitive barometer of leadership skills. (See list of LRC tasks.)

An LRC has five primary functions:

- To improve soldiers' leadership abilities by giving them an opportunity to apply the lessons they learned in their formal leadership instruction.
- To help soldiers assess the degree to which they possess certain leadership traits.
- To provide soldiers with a means of evaluating their own leadership ability more accurately.
- To give soldiers an opportunity to observe the way strengths and weaknesses



es of others affect a team operation.

- To develop individuals as leaders by testing their competence in handling a small team that has been charged with accomplishing a mission under conditions of stress.

In addition, the course can develop unit cohesion, strengthen the chain of command, and measure squad effectiveness under competitive conditions.

The first permanent American facility for an LRC was built at Maxwell Air Force Base (AFB), Alabama, in 1951. Labeled Project X, it was used to train students in the Squadron Officers' Course. The concept was soon adopted at Fort Benning, Georgia; Lackland AFB, Texas; the Air Force and Military Academies; Army NCO academies; ROTC summer camp sites; and elsewhere.

The Fort Benning course, built in 1952 by Engineer soldiers, is the oldest and busiest course of its type in the Army. (The first class to use the course officially was the first Officer Candidate School class of 1954.) It was rebuilt in 1963 by the 577th Engineer Battalion, which added a 75,000-gallon pool of water for use in 10 of the 17 tasks. The course itself is arranged to permit the evaluators to exercise maximum control and to reduce the time required for the participants to move from one task to another.

The operation of all LRCs is similar. Typically, the emphasis is on giving each soldier an opportunity to be the leader for at least one of the tasks.

A participating unit is usually divided into equal squads of 10 to 12 soldiers, who are issued rubberized M16 rifles and then told to report to the evaluator at their first task location. Each squad is subsequently divided into two equal teams—the working team is responsible for completing the mission, while the observing team provides safety personnel, over-watch and support elements, and harassers.

An evaluator designates one of the working team members to be the leader for a particular task. This soldier and the observing team are briefed on the mission, and the leader is given two minutes to conduct a reconnaissance of the area and to formulate his plan. After his reconnaissance, the working team lead-

er is given 12 minutes to complete the task.

Stress plays an important role in the evaluation, because it is through stress that a leader's true problem-solving processes and leadership skills become apparent. A stressful environment is created for each task by introducing numerous limitations, one of which is time. The working team members are also restricted as to what they may touch, and they can use only the equipment at each site. Finally, the members of the observing team stand nearby verbally harassing the working team.

## EVALUATION

At the conclusion of the allotted time, "Cease work" is announced. The working team then returns the equipment to its proper place, and the evaluator conducts a brief critique of the working team's performance. Subsequently, the teams switch responsibilities and move on to the next task. (Later that same day the evaluator should provide a more detailed assessment of each leader's performance.)

Each LRC task is a small engineering problem that is designed to be solved

simply and efficiently. But none of the problems can be solved successfully without teamwork on the part of the soldiers in the group. The skill of the leader, therefore, determines the success or failure of his group.

Interest in evaluating the skill of potential leaders has long been the focus of LRCs. The Germans, who were reportedly the first to employ the concepts that support the course, initially used these concepts to select officer candidates. They reasoned that "when an entire people is drafted, the most various abilities and special aptitudes become available, and each single man must be placed where he can best serve his country."

Germany's pre-World War II senior military psychologist, Max Simoneit, looked for specific characteristics in officer candidates. He and nearly 200 other German psychologists examined officer candidates for aptitudes, temperament, personality, likes and dislikes, attitudes, and ambitions. The German Army considered desirable officers to be those who had the qualities of imagination, rapid learning ability, capacity for swift adjustment, initiative and willpower in thought and action, emotional stability, and security of conduct, and whose attention was directed outward rather than inward.

## LRC TASKS

1. Escape from a POW compound.
2. Scale a heavily mined cliff and cross a water obstacle to deliver urgently needed ammunition.
3. Cross a river to deliver a box of Dextran (blood expander).
4. Cross a rapidly flowing river by means of a partially destroyed bridge to deliver ammunition boxes.
5. Cross a stream with a drum of gasoline.
6. Climb through a culvert with ammunition boxes, and then cross concrete abutments that once supported a bridge.
7. Deliver a box of ammunition to the far side of a stream.
8. Cross two large electrically charged pipes and a river to deliver a special round of ammunition.
9. Cross a blown-out bridge over a deep gorge, and deliver two captured ammunition boxes.
10. Cross a blown-out bridge with a cartload of supplies.
11. Cross a minefield.
12. Breach a minefield carrying sensitive items.
13. Destroy an ammunition dump.
14. Cross a minefield enroute to reinforcing a squad pinned down by fire.
15. Cross a gorge with a critical resupply of ammunition.
16. Set up a forward observation post on the far side of a minefield and tank trap.
17. Recover a small load of ammunition from the far side of a minefield.

The methods of selection employed by Simoneit and his team eventually gave rise to the current reaction course. Simoneit hypothesized that a man's actual achievements did not indicate as much about his potential as the way in which he attempted to do things. For this reason he would arrange situations as nearly as possible to those of actual combat to see how a candidate behaved.

When World War II broke out, the British also were obliged to select large numbers of officers in a hurry. In doing so, they developed a system that combined the best features of the German selection system. These techniques were especially effective as employed by the British intelligence services, which designed individual and group tasks such as negotiating a water obstacle with 100 pounds of sensitive radio equipment, as well as other tasks to see which member of a group would emerge as the leader and whether the others would willingly follow him. After the war the British continued to use these same concepts as one way to determine the leadership potential of candidates for Sandhurst and the Royal Air Force Academy.

During the post-war era, the U.S. Army Ground Forces command created

a Leaders Course at each of its training centers to detect and train potential leaders. This six-week course was designed for OCS nominees and for young soldiers who had been recommended by their company commanders as being potential noncommissioned officers.

During the third week, the soldiers ran a Leaders Reaction Course. It consisted of 20 mock situations set up in difficult terrain. The soldiers were formed into five-man patrols. (Each soldier acted as the patrol leader for four of the situations and served as a member of the patrol in the other 16.) The soldiers were evaluated during the reaction course and were then critiqued on their overall performance at the end.

The value of the present LRC for the Army has been demonstrated for more than 30 years. It has helped trainers identify soldiers who were creative, soldiers who could lead, and soldiers who stifled mission accomplishment.

The Army will likely continue to expand its use of the LRC concept, because the course fosters the development of teamwork and promotes cohesion. It also provides immediate leadership feedback—the leader sees quite vividly how his own actions and those of his comrades

either help or hinder the accomplishment of the mission.

It also gives a leader practical experience in evaluating the abilities of other men. By observing the way his team members respond to his actions and orders, he can determine to what degree he is able to get results from others. Finally, the LRC provides an environment in which the validity of a soldier's leadership instruction can be checked.

The LRC is a leader development and assessment course. Its realistic battle-field-like tasks provide an ideal training environment for soldiers regardless of their backgrounds. It also provides an effective analysis of a soldier's leadership abilities, enabling him and his trainers to focus on those leadership skills that require more attention.



**Major Robert L. Maginnis** is a leadership instructor in the Infantry School. He is a 1973 graduate of the United States Military Academy and has attended the Naval Postgraduate School. He previously served in Europe with the 8th Infantry Division.

# Rail-loading a Heavy Brigade

**CAPTAIN MICHAEL V. TRUETT**

Moving military equipment by rail is becoming an increasingly frequent task for many infantry leaders. Most Army units in the continental United States are subject to periodic rotations to the National Training Center (NTC) at Fort Irwin, California, just as many overseas units must deploy by rail for major training exercises. In addition, many units are required to rail-load for deployment to support National Guard or U.S. Army Reserve training, or to facilitate their own

off-post training requirements—cold weather training at another military installation, for example.

The planning process for rail-loading is complex and detailed. Rail-loading is done at all levels of command (platoon, company, battalion, brigade), but the higher the level the greater the complexity of the planning and execution. The diversity of a unit's equipment also complicates the operation. For these reasons, a discussion of rail-loading the armor,

mechanized infantry, field artillery, combat engineer, and support battalion elements that normally deploy as parts of a mechanized infantry brigade may be the most useful. And these same considerations can be applied to other levels as well.

When a brigade is notified of an upcoming deployment, the S-4 will usually assume staff responsibility for the rail-loading process. He will be responsible for analyzing the mission upon which the



deployment is based and for building a rail-load concept based on his estimate of the situation.

The division transportation office (DTO) and the installation transportation office (ITO) will pass requirements and provide information to the S-4 on an increasingly frequent basis as the brigade's actual deployment date nears.

One of the S-4's early requirements will be to compile a list of equipment to be rail-loaded, and the individual units must be tasked to provide this information early in the process. Changes will occur, of course, and should be allowed within reason, but this document at least will provide a starting point from which the S-4 can identify the number and type of rail cars needed to move that equipment. And since a large portion of the funds allocated to the deploying unit for the move is expended on rail cars, identifying requirements early can greatly assist the units in managing these funds. (For help with this aspect, see also "Rail Movement Spreadsheet," by Captain Charles B. Pelto, *INFANTRY*, July-August 1986, p. 17).

Another of the S-4's early considerations will be the preparation of a letter of instruction (LOI). Although instructions are usually published as part of the service support annex to the operations order (OPORD) for the exercise, in many cases the rail requirements are due before the OPORD is issued and therefore cannot be clearly defined until immediately before their execution.

Once the initial requirements are known, the S-4 should prepare and distribute a milestone list. (Updates can be published later to pass along current information as it becomes available.) The milestone list should give suspense dates and schedule necessary events. For instance, if the ITO projects that load plans will be available on a certain date, the S-4 should schedule a meeting the following week with all of his unit points of contact (POC) to disseminate this information. To enforce the milestone schedule, the S-4 should provide a copy of the LOI to the ITO and the DTO and should talk directly with the key people in his units to make sure they understand the concept of the move and the importance of staying on schedule.

Likewise, the milestone list should task subordinate units far enough in advance to help them in their planning. For this reason, the milestone sequence must begin at least 120 days before deployment. Additionally, weekly in-process-review (IPR) meetings must be scheduled by the highest staff involved. While the people who attend these meetings may vary as the brigade's deployment nears, the initial attendance of the key staff personnel will ensure a unity of effort. The DTO and the ITO must attend these IPRs as the actual movement day nears, because they can provide timely answers to the units' questions. Written minutes of these meetings must be taken and distributed to the units represented.

### MULTITUDE OF TASKS

In large moves, of course, much equipment is involved, and this means that a multitude of tasks—collective and individual—must be accomplished by the deploying unit. Some tasks, such as preparing vehicles for transport, are done by each unit. Others, such as drawing blocking and bracing material, can be performed one time for all the units involved. Tasks that can be consolidated at the highest level should be identified and delegated to one unit. Also, all taskings must include the requirement that the performing unit identify by name the responsible officer or NCO in charge (OIC/NCOIC) and specify a suspense date. Rail-load teams must also be identified. This process forces leaders to do detailed planning.

An initial meeting with the designated OICs/NCOICs should be included on the milestone list, and the S-4 must hold this meeting well in advance of the actual loading so that the units that fail to respond can be contacted. This meeting can also serve as an excellent way for the S-4 to establish face-to-face rapport with the unit points of contact. If this meeting is conducted early enough, the tone can be more informal, less directive, with more time for questions and for gathering information. A last-minute meeting will necessarily be stiff and directive, with fewer questions and an increased possibility of poor execution.

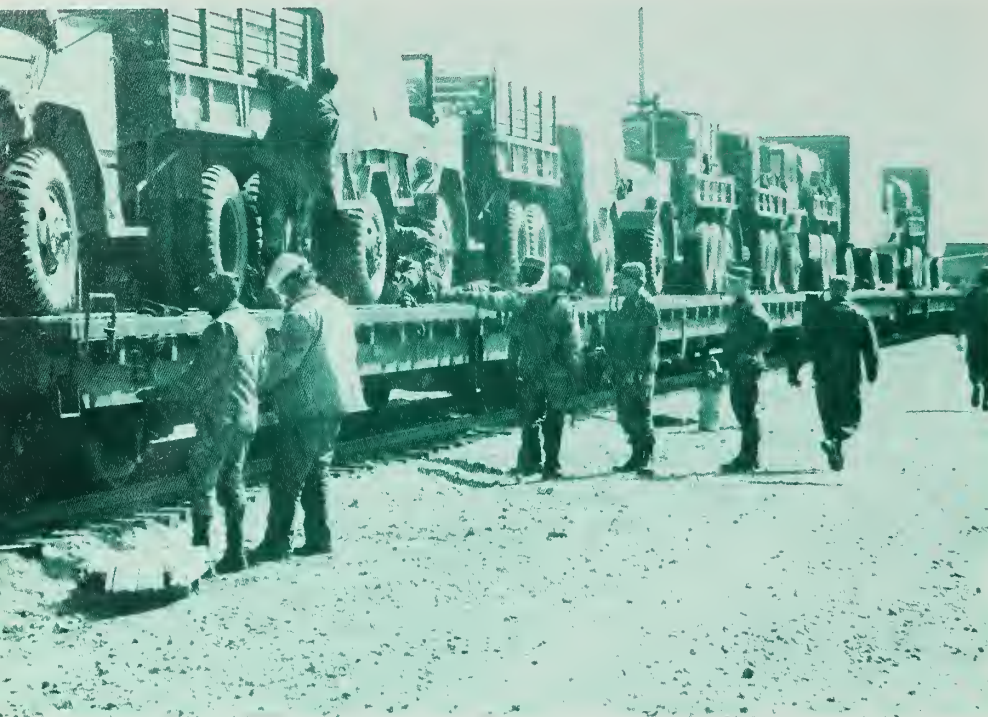
The designated rail-load teams then need to be trained. At the time their names appear on the list, many of the soldiers involved typically have no idea how to tie down equipment on rail cars. Because of the normal personnel turnover in CONUS units, even periodic training fails to meet unit needs.

Rail-load training classes are normally conducted by the DTO, the ITO, or by unit personnel. In rail-load "testing" (or the actual deployment), civilian inspectors from the railroad being used approve or reject each piece of equipment. In my experience, it was never possible to have these inspectors conduct training at the unit level three months before deployment. In fact, since the requirement for rail cars is submitted for bidding to all local railroads, the actual carrier is usually not identified until a few weeks before the move. If it were possible to do, the contract should certainly require that the same inspector who conducted the training also qualify the load during actual deployment. I have seen units train to a specified standard only to discover, after an entire track of rail cars had been loaded, that this standard was unsatisfactory to that particular civilian inspector, of that particular railroad, on that particular day.

One solution involves units in conducting familiarization training (as opposed to in-depth training) for its rail-loading teams. In this training, the teams are shown the various tools, the different turnbuckles, and the equipment used and are given detailed safety precautions. On rail-load day, the team ties down the first vehicle on the first rail car; then the entire rail-load team, OIC, and NCOIC gather around as the civilian railroad inspector checks the load. He points out deficiencies and everyone understands what is required. From there, the crews can separate to complete the operation. While this method will get the rail-loading off to a little slower start, it can mean the difference between the soldiers' being at home at 1630 and still there retying vehicles at midnight.

The initial LOI must also consider rail guards to accompany the equipment. The ITO can project this requirement, if it applies, but the unit retains responsibility for the guards. If the assigned units are





Soldiers of the 4th Infantry Division load equipment.



tasked early, they can identify the soldiers who are to act as guards—perhaps using men who would prefer not to fly, for example. The tasked unit is normally responsible for feeding the guards as well. The period of rations specified in the LOI must include total travel time, plus any time the guards sit waiting for the off-load teams to arrive.

Above all else, an S-4's planning process must consider what is actually going to happen at the railhead during the loading.

Equipment to be rail-loaded is normally assembled in one location and sequenced in the order in which it is to be loaded—a process referred to as marshalling. If it is performed the same day as loading, the day will be long and hectic. Marshalling, therefore, can take place the day or afternoon before loading. In either case, problems will arise that must be dealt with. It is common, for instance, for a deadlined vehicle not to show up at all. In this case, if marshalling has been done the day before, there will still be time to shift loads or to identify a substitute vehicle. But marshalling the day before may cause other problems: Invariably, the next morning, some drivers will not report on time, or some vehicles will not start, or other equipment will have flat tires. The trade-offs must be weighed carefully.

A maintenance team and a fuel vehicle should be tasked and placed under the control of the marshalling OIC. In most instances, vehicles must move onto rail cars under their own power, and a railroad inspector usually will not accept equipment with Class III leaks but will require that they be repaired.

Rail teams need tools, of course, and a basic list of what is required must be compiled and distributed to the OICs/NCOICs. The teams must bring the tools on the list with them each day of loading. Most of the necessary tools can be found as part of the equipment of armored vehicles. Other special tools or equipment may be needed on a limited basis—such as cable or boltcutters—and these should be available at the DTO in the form of mobilization tool kits. Any specific items that are not locally available should be identified and requested. Team members should also have



leather gloves available.

When the teams start to work, they will need some basic equipment, which will vary depending on the type of equipment being loaded and the type of rail cars being used. Again, the DTO, ITO, or installation engineers can help determine the unit's needs. Some examples of the equipment needed are turnbuckles, clamps, cable, chock blocks, nails, lumber, shackles, banding material, lacing wire, and tape. Some of these items must also be available in different sizes and lengths to accommodate particular pieces of equipment. (While this may sound obvious, I have witnessed loadings during which a unit was unable to tie down vehicles sitting on the rail cars because its loading teams had the wrong size of lifting shackles. The short time it would have taken to check the equipment against the vehicle a month earlier would have been time well spent.)

## TRANSPORTATION

Transportation at the railhead, with all the vehicles there, would not seem a likely problem, but key personnel frequently find themselves unable to maneuver. The S-4 or the rail OIC must seek alternate transportation from non-deploying units or from unit vehicles that are to be moved later (possibly by air). All deploying units will have some transportation problems during this time, because all their cargo carriers will have been prepared for loading.

Accordingly, all rail-loading plans should include buses to return drivers to the company areas after marshalling and loading their vehicles, and to take the rail-load teams to and from the railhead. Some form of transportation will also be needed to deliver the blocking, bracing, packing, crating, and tiedown (BBPCT) materials to different locations as they are needed. (The deploying units will have bought this equipment. Because of the amount of equipment and the time required for loading, it may be necessary to secure the BBPCT in a central location over a period of days.)

The dangers to personnel loading heavy equipment is evident in rail operations. Therefore, a medical evacuation

vehicle with trained medical personnel cannot be overlooked. Although an ambulance is the preferred vehicle, it is not required as long as some kind of suitable vehicle is available.

The final item on the subject of transport is supplying food for the rail-load teams and drivers, who will probably be working through at least one meal. Buses can be arranged to take troops to a dining facility, if one is not readily available. But the time used for travel and for dining slows down the momentum of the loading. In addition, it takes time to secure tools, board buses, unload, find missing soldiers, and so on. An alternative is to plan for sack lunches—or for hot food—to be delivered to each loading site. Some form of transportation is required in either event. (Planners should also be aware of the morale value of having coffee or juice available for the unit loading teams, especially when they are either loading in the snow or tying equipment down in 110-degree heat.)

Command and control at the railhead are vital. The overall OIC (usually the brigade S-4 or his representative) cannot run the operation from his garrison office. He must be on the site, with a known command post (CP) location where everyone involved can reach him, including visitors. And visitors will abound, from company commanders to the division or installation commander. The need for someone knowledgeable to be on hand to meet incoming VIPs cannot be overemphasized.

The CP can be a tent, if no other structure is available. It should contain copies of the LOI and possibly charts that depict the rail schedule and track the progress of the loading. It is a good idea also to control the medical evacuation vehicle and personnel from this central location as well as a vehicle loaded with BBPCT to respond to unit needs.

When loading is suspended for the day (usually at dusk, for safety reasons) guards must be posted and the CP can then become the sergeant of the guard's headquarters. The vehicles awaiting loading and already on rail cars—including CONEX containers with unit equipment packed in them—represent a substantial investment. And some of the containers undoubtedly will hold sen-

sitive items such as night observation devices, machineguns, and TOW equipment. Guard duties can cease when rail-load activities resume the following morning.

## CONTROLS

Backbriefs are an effective control measure. While loading, crews can be operating at several tracks at the same time. Some crews will complete their loading before others, and when they are finished for that day, the load team OIC should brief the responsible officer before leaving. This insures that all the rail cars are in fact completed and that the railroad inspector has accepted the load. In addition, it provides an opportunity for outlining the following day's activities and for discussing any problem areas (late buses, inadequate rations, and the like).

Communication equipment is also needed for command and control, but the deploying units typically will have packed all their radios for the move. A solution is hand-held radios (walkie-talkies). (Although these are not authorized by TOE or MTOE, some installation agencies such as DTO, ITO, or the military police may have them. The local procurement channel is another alternative that will let the unit retain the radios for off-loading and redeployment operations.) This ability to communicate can solve many railhead coordination problems quickly and also increase the responsiveness of medical personnel. Perhaps most important, it allows the OIC more mobility, and there is no substitute for being on the scene, watching the progress of the loading and anticipating needs.

Finally, on command and control, once the deployment sequence starts, it must proceed on schedule. The OIC will know where he can take extra time and where he has none to spare. Weather cannot be allowed to control the operation. This may require warming tents at each track or simply wet weather gear for the men. Whatever the extreme, the OIC must plan for all contingencies and be prepared to carry out the plan.

Plans for loading the rail cars must also include certain considerations of how the

equipment will be unloaded at the other end and also who will need to be there. For example, if the units want to have a hot meal immediately upon their arrival, the mess equipment should be put on the first train out.

Drivers and crews for off-loading should be among the first soldiers deployed, and the drivers should make sure they have with them the keys to their vehicles. In any event, the OIC, who should also be on that first plane, should have "master keys," in the form of boltcutters, on hand and should use them judiciously.

Maintenance personnel and equipment must be immediately accessible at the unloading site. Since equipment arriving in the first train may have been on the rail cars for as long as a week, some vehicles may not start, may have flat tires, or may even have no batteries or fuel.

An immediate source of water will be needed to refill dry radiators, and units should have appropriate oils and hydraulic fluids on hand. If an immediate road march is projected as soon as the equipment is unloaded, the importance of

many of these considerations increases tenfold. Tow cables, wreckers, and slave cables are especially important.

During off-loading, many events will occur as a reverse process of the loading sequence. But during loading, flatbed trailers are usually available for hauling the CONEX containers, cranes are there to help load the containers, and there are many forklifts. Later, at a strange railhead, these items may not be available. If they are, it will be because they have been requested in advance.

## SUPPORT

The unit may ship its own support assets, but, once again, their placement on the trains may be critical. If the CONEX containers arrive on the first train but the crane is on the last, hot meals will be delayed and the ration cycle destroyed.

Finally, plans must be made in advance for the redeployment as well. The equipment used to rail-load the unit (the BBPCT) should be salvaged and secured in a consolidated location. Some items, such as a certain number of the chock

blocks, will not be usable for redeployment. Extra chock blocks, nails, lumber, and wire may be procured from the redeployment railhead source, but if this cannot be positively confirmed, redeployment supplies should be shipped. These can be turned in for credit later if they are not used or if they are still usable. Logistical flights from the home installation may also be able to deliver pre-planned redeployment supplies.

While these considerations are not all inclusive, they do cover some of the recurring and, hopefully, more applicable concepts. They have not been listed in order of priority. With our current doctrine to fight anywhere in the world and under any circumstances, though, the importance of a unit's ability to deploy efficiently by rail is obvious. These thoughts should help unit logisticians meet that need.

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Captain Michael V. Truett recently completed the Infantry Officer Advanced Course. Previously, he served as a battalion S-4 and a brigade Assistant S-4 in the 4th Infantry Division. After eight years of enlisted service, he was commissioned through the Officer Candidate School in 1981.

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# Brigade First Sergeant

SERGEANT FIRST CLASS PAUL H. JOHNSON

Because of the nature of a brigade headquarters company, the job of brigade First Sergeant is different from that of a First Sergeant at other levels. Yet it is not a subject that is often written about.

I realize that there are many First Sergeants who have held this position in the past, and each of them probably has his own unique insights and opinions about it. But these are my ideas after serving for six months in the position in a brigade in Germany.

First, the person selected for this job does not always have the experience or the training for it. I am a prime exam-

ple—I was not even on the list for promotion to first sergeant when I took the job, and I had to submit a request to attend the First Sergeant Academy after I began the job. (I still don't know when, if ever, I will be attending.) But my brigade command sergeant major, who interviewed me for the position while on a field problem, said he had faith in me and expected me to be on the next promotion list, so I accepted.

Without the benefit of the academy, I, like many others before me, had to start digging, recalling my experiences with all the good and bad First Sergeants I had

known and considering a lot of advice from just about everyone. I had an idea where to start, but the company and I suffered a little while I grew into the position.

All First Sergeants, no matter their experience, are automatically supposed to possess an endless wealth of knowledge on every subject in the Army. They are also supposed to be able to handle every situation no matter how critical, with cool expertise. The company commander and the company personnel rely upon him for his judgment and advice.

As a platoon sergeant or a staff NCO,



I always had my First Sergeant to rely upon, but now all of those people were relying on me. The first thing I had to do was to find out who to trust, who was reliable, and where to get correct information. (This is a problem for anyone new in a company, but it is multiplied by ten for the new, inexperienced First Sergeant.) Fortunately, I had the benefit of about 12 years of staff time to fall back on, and that came in handy.

For instance, a brigade HHC handles all of its own personnel actions, supply actions, and maintenance functions—matters that are usually handled in the battalion staff sections. To be really effective, a brigade First Sergeant must be knowledgeable of all company functions as well as all the functions of a brigade staff section.

In addition, the First Sergeant must keep up with the command group personnel and what they are doing. None of these things are easy even for an experienced First Sergeant. (I always envied those First Sergeants who had clean desks and made it appear that they had nothing to do.)

What are the solutions to these problems? The primary solution I came up with was to learn fast and retain information for future use.

First, it is imperative that the company commander and the First Sergeant work as a close-knit team and that they also include the executive officer in the team. These three must stick together through thick and thin, even if they don't like each other at all. (I was lucky—we all hit it off.)

## PROBLEMS

The HHC commander is usually a captain, and he is charged with commanding a company full of officers who are his senior. Many of these senior officers seem to try to influence him and run the company for him, or around him. And the First Sergeant at brigade level, especially if he is a sergeant first class, has exactly the same problem, because he has a lot of NCOs who are senior to him. If he steps on their toes, they will say what many a section NCO has said before (and probably will say again): "To hell with

that First Sergeant; he doesn't know what he's doing." (Having been an operations sergeant twice, I've said those words about a couple of First Sergeants who did not seem to have my section's best interests at heart.)

While the HHC commander and First Sergeant must be a team, make hard decisions, and keep the company functioning, each must also work with the senior staff personnel, guiding them instead of using hardline leadership. The fewer bosses the individual soldiers have the easier it is to function as a company team instead of as separate staff elements trying to be small companies unto themselves.

Working with staff officers and NCOs is a complex problem, but it doesn't have



to be impossible. In a company made up of staff, communications, maintenance, and organic company personnel, each group has a specific mission that should be taken into consideration before any edicts are delivered. In all cases, of course, the company missions must be accomplished. But, barring any specific time constraints on the company, each section has specific missions and time constraints of its own that many commanders and First Sergeants don't take the time to know or care about.

The First Sergeant should coordinate daily, if possible, with all sections for updates and feedback on specific problems they may have and any last-minute mission changes. Any First Sergeant or company commander who firmly states that all sections "will comply" with something that directly contradicts higher level commitments is asking for trouble. Each section is usually willing to do its part for the company, but the company must show some compassion.

It is easy to step on toes. High handed-

ness and demands are often met with a great deal of resistance. The result is a lot of animosity in both directions, and no work is accomplished. The First Sergeant should be firm, not unyielding, and above all, fair.

## MORE PROBLEMS

In some instances, however, when dealing with staff personnel the First Sergeant will hear "You're doing a good job, First Sergeant," but that person will return to his section leaders and remark, "If that guy thinks I'm going to comply, he's crazy. Will you talk to him for me?" Then the section chief comes over to try and work things out with the "upstart Little Dictator" who, in his opinion, is trying to operate the HHC like a line unit. Such tactics create more problems than they solve and should be avoided by everyone, if possible.

One area of conflict is formations. Senior section NCOs and officers can come up with lots of reasons not to make company formations (especially PT) and most other company events. The First Sergeant must first monitor the problem and then talk with the habitual no-shows. Embarrassing those people in front of the company will result in more "stepping on toes" in both directions. It takes a certain amount of diplomacy. That is not to say the First Sergeant shouldn't make those individuals toe the line, but a little understanding will go a long way.

What about the First Sergeant's relationship with the primary staff? A brigade commander usually does take the time to oversee the operations of the HHC but, being a busy man, he uses the brigade executive officer as the liaison between the company and the primary staff. In most brigades, the XO is the primary advisor for the HHC commander, while the CSM is the primary advisor and mentor for the First Sergeant.

The CSM is usually very busy, but when he is available he's a wealth of knowledge. (Of course, the First Sergeant must know the right questions to ask the CSM before he can lend a helping hand.) The First Sergeant should see the CSM at least once each day, if for nothing more than to ask how things are



going and to get command group updates. (This can also save criticism later if an unhappy NCO or soldier bypasses the First Sergeant and goes directly to the CSM with a problem.)

The First Sergeant also has to use the NCO chain and see that information is passed to everyone. In a brigade HHC the situation is unique, because there are different faces at each formation, and the platoon sergeants at many of the formations are only detailed to their positions. Each formation is manned by the personnel "available," depending upon the mission or the crisis at hand. (Our HHC had only three formations a day—PT at 0600, work call at 0830, and recall at 1700.) Most of the time, the information I put out at these formations was passed up and down the chain. The soldiers in the formations got the information but didn't always retain it all, so I found it helpful to put out important things two or three times, at different formations during the week, time and mission permitting, so everyone would get the word.

The problem with information being passed down to soldiers not present at the formations is that section NCOs seldom speak to the soldiers of another section. If the actual platoon sergeant is not there, sometimes soldiers working elsewhere do not get the required information.

Meetings with section sergeants and platoon sergeants should be held only when necessary. The First Sergeant will normally see the section NCOs some time during the day to pass information or deliver notes. (I once had a First Sergeant who required section sergeants—no assistants or representatives allowed—to be in his office every day at 1600 for a meeting, regardless of the mission or the amount of information he had to put out. I always considered that policy totally out of touch with reality.)

Training is a real challenge in a headquarters company. Few section leaders will consider stopping the operation of their sections to do individual or section training. They seem to think the entire brigade will cease to function if they shut down operations for one or two hours a week to train their soldiers in MOS-related skills. Without the First Sergeant's influence, the soldiers' training might never be accomplished. In my bri-

gade, fortunately, there were section leaders who could plan their time and train their soldiers without the First Sergeant leading them by the nose every step of the way. A First Sergeant may tend to rely on NCOs such as those a little too heavily. (Instead, he should *lean* on those who *don't* train their soldiers.)

Another unusual aspect of the job of First Sergeant in a combat maneuver brigade is having women in the unit, and this may take some getting used to, especially if a new First Sergeant has come up only in line companies where there were no women.

Women fill important positions in all the staff sections as well as the company



and even work as mechanics. The same percentage of women as men are good and great soldiers. In my brigade, they worked as hard as any of the rest of the soldiers in the command. It is important not to treat them any differently. But women have their own ideas of how things should be and waste little time telling the First Sergeant what they think. He may or may not be ready for "I don't work on weekends," or "Why did you single me out in formation?"

The First Sergeant may encounter some problems in a "co-ed" barracks environment—making sure visitors of the opposite sex, even from within the barracks, sign in and out on the visitors' log when visiting each other's rooms. And occasionally, when two married service members have a sick child, one goes to the hospital with the child, while the other one has to stay with their other children. These are minor hassles, but usually nothing a First Sergeant can't handle with understanding and a little practice.

Taking a brigade headquarters company to the field is where a First Sergeant

must have, among other things, common sense and a good sense of humor. His primary duties include feeding everyone, on time; refueling and keeping the vehicles and generators running; supplying drinking water; keeping the mail flowing both ways; supervising the company trains, which includes keeping mess, maintenance, and supply personnel and the rest of the company motivated and cared for. In some brigades, the First Sergeant also assists the HHC commander by moving the trains while the commander moves the TOC.

If a new First Sergeant has never worked in or around combat or field trains, he is in for several surprises. The trains personnel try to work in all types of uniforms, become unsupervised very quickly, and are on occasion hard to find.

"Beans and bullets" take most of the time, because the trains are at least one terrain feature away from the TOC. The trash and water points in Germany can be from 5 to 25 miles away, each of which turns out to be a daily run. Feeding and taking care of personnel attached to other elements or detached from the main TOC, such as the brigade S-4 and the forward support elements, becomes time consuming, because these elements can be stretched from the far rear of the maneuver area to the most forward part.

## ATTACHMENTS

Attachments are another challenge. Sometimes during REFORGER exercises, a brigade has more attached soldiers than are assigned to the company as a whole. All of this doubles the First Sergeant's and the company's role.

The First Sergeant must plan, for example, for the attachment of an estimated 30-person umpire package and for Air Force, artillery, engineer, signal, chemical, and liaison personnel. In addition, the support plan must include VIPs and commanders from all units coming in during meal times for meetings with the brigade commander and the staff. Further planning is required to support elements of the TOC that are detached and moved miles away to perform their duties. The First Sergeant must also personally take care of all the drivers



(assigned or attached) to make sure they eat and sleep and don't collapse from exhaustion. (A good training NCO can take on some of the burden during extended field exercises).

Keeping morale up is sometimes difficult. As with any other unit, the morale fluctuates with field problems, inspections, missions, and very little time off. The soldiers in my brigade worked hard, and their morale rose and fell like a tidal

wave. They didn't always understand or like it, but they pitched in and got the job done. I am sure of one thing—morale and motivated, disciplined leaders go hand in hand.

These are some of the problems I encountered, and these are some of the solutions I came up with during my short tenure. I still have a long way to go as a First Sergeant, but I am constantly learning. Luckily, though, the soldiers

and the NCOs of the company were always willing to help with my training.



**Sergeant First Class Paul H. Johnson** was First Sergeant of Headquarters Company, 2d Brigade, 3d Infantry Division in Germany in late 1984. He is now assigned to the NCO Academy at Fort Carson.

# The Soviet BTR-80

CAPTAIN GEORGE T. NORRIS

A recently released issue of *Soviet Military Power* refers to a new Soviet APC, the BTR-80, but does not provide any additional comments. Once again, we have a situation in which the Soviets themselves have said more about a new weapon system than our own intelligence services. Although it is always possible that no such vehicle exists, it is important to consider just what might happen if it does. Beyond that, the question should be what effect the new system would have on the battlefield.

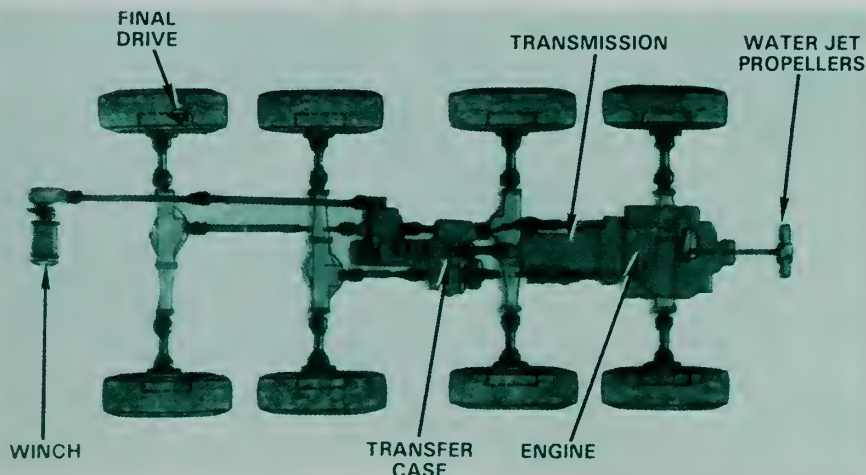
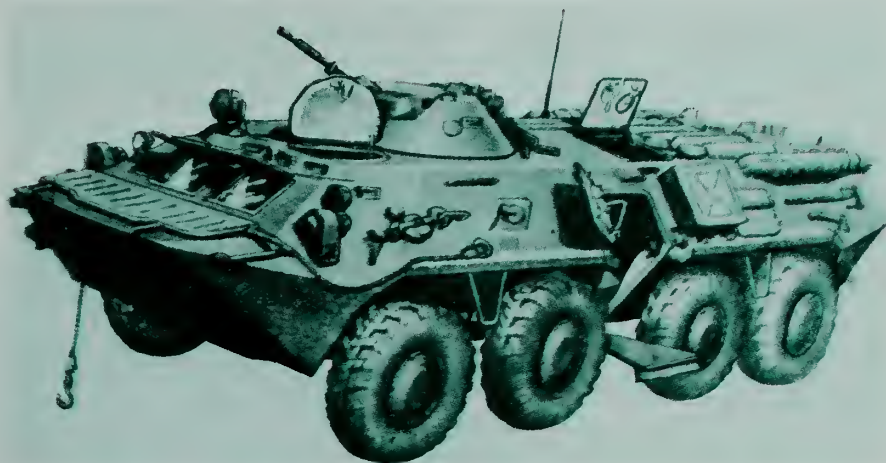
The Soviet description of the BTR-80 and its accompanying sketch indicate that it is much more capable than any of its predecessors. Like both the BTR-60PB and the BTR-70, it is a wheeled, 8x8, squad APC that is amphibious without significant preparations. It does, however, correct many of the limitations of both earlier vehicles.

To begin with, the Soviets have used a single diesel engine instead of the twin gasoline engines of the BTR-60/70. In addition to a lower risk of fire, the single engine makes maintenance easier. An improved power train has been added, so the BTR-80 will have good cross-country mobility. Better armor protection and integral fire extinguishers provide increased protection for the occupants.

In addition to better survivability, the

vehicle also appears to offer much better performance in combat situations. One serious limitation of the BTR-60 and

the BTR-70 is the fact that they, like our M113, are essentially battlefield taxis—their occupants cannot fight effectively



while mounted. With the BTR-80, the Soviets appear to have changed that: they have provided a firing port for the vehicle commander in the front of the vehicle. The squad members located in the center of the vehicle now sit facing outward, with a firing port for each. Two vision blocks on each side allow the squad members to orient themselves on the battlefield without looking out the hatch. The maximum elevation of the machineguns in the turret has been increased, which allows them to engage aircraft and other targets above the vehicle. This feature and two firing ports in the roof appear to be the result of a lesson learned the hard way in Afghanistan.

If the infantrymen in the BTR-80 are actually required to leave the vehicle, they will be able to do so more easily. In the BTR-60PB, the only ways out were through the hatches on the top of the vehicle or through the side hatch. The BTR-70 added an escape hatch between the second and third wheels on each side, but a soldier essentially has to wriggle in and out and cannot wear any equipment and still fit through the hatch.

The BTR-80 retains the two hatches on the top of the vehicle, but they are not the primary ways of leaving the vehicle—the side hatch has now been en-

larged and, in place of the escape hatch, a second hatch has been added directly below the side hatch. The side hatch swings to the front, while the lower hatch opens downward, serving as a ramp for soldiers leaving the vehicle.

With infantrymen who are now in a better position to fight while mounted, and who have an easier time dismounting from the vehicle, how well can the BTR-80 be expected to perform in combat? To begin with, it remains an APC, and the Soviets still do not consider it an IFV. Although it appears to have better armor protection, most antitank weapons can still defeat it. In fact, when the LAW is replaced by the AT-4, every antitank missile we have should be able to defeat it. And it is likely that the chain gun on our Bradley vehicles will also be able to penetrate the armor of the BTR-80, although the Soviets must be doing something to try and counter that as well.

As with its predecessors, the tires on the BTR-80 remain a vulnerable spot, but only if enough fire can be directed at them to destroy their integrity. Machine-gun fire that rips up the sidewalls and any any flame weapon that burns the tires should stop the vehicle in its tracks.

With all these problems, did the Soviets really develop the system, or is

this another one of their famous disinformation jobs? Since it is an improvement on the existing BTR-60s and BTR-70s, the vehicle most likely actually exists. Recently, when the Soviets provided a good deal of information about an 82mm mortar called the *Vasilek*, many analysts also initially doubted its existence, but it has proved to be an actual weapon that does just what the Soviets said it did.

The Soviets continue to be required to field large numbers of wheeled APCs for two good reasons. First, the vehicle is inexpensive to make and easier to maintain than a tracked vehicle, and second, Europe is covered by a very well-developed road network on which a BTR's mobility makes it superior to almost every tracked vehicle.

The side of this that is unpleasant for the Soviets but pleasant for us is the fact that our Bradley will continue to be capable of defeating all of their infantry vehicles through at least the end of the century.

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# COHORT BATTALION TRAINING

CAPTAIN HAROLD E. RAUGH, JR.

The conversion of the 7th Infantry Division (Light) to its present configuration resulted in its expansion from two to three active duty infantry brigades. This was done primarily by assigning the Army's first three COHORT light infantry battalions to the division, one to each reconfigured brigade.

All the division had in the way of guidance for training these battalions was the recommended use of Tactical Battle Drills (TBDs) in multi-echelon training and the ARTEP Mission Training Plans (AMTPs). The battalions therefore had to develop and execute their own training plans. One of them was the 5th Battalion, 21st Infantry. Other light infantry battalions may find this battalion's training plan useful as they activate their own COHORT units. \*

As a newly activating unit, the 5th Battalion initially had only a few soldiers, no equipment, and no billets. The S-3 and the command sergeant major, who were first assigned to the provisionally activated battalion in November 1984, immediately began their planning under the direction of the battalion commander-designate, who was then the brigade executive officer. In addition, the brigade adjutant had been selected to command a rifle company in the new battalion, so he

was also available to the battalion from its inception.

This vanguard of the 5th Battalion, 21st Infantry met frequently to establish goals and standards and to create a vision for the new unit. This vision was further translated into a command philosophy and explained in detail to each member of the chain of command when he came in.

Most of the battalion's officers and NCOs reached the unit in February and early March 1985, and they immediately in-processed and procured local quarters. Battalion-organized diagnostic hands-on and written skill tests were administered to them, and reinforcement training was conducted to bring them up to the level expected of their MOSs and skill levels, and to prepare selected ones to attend the Light Leaders Course at Fort Benning. There was also a great deal of emphasis on their physical readiness and on increasing their mental and physical stamina.

At the same time, company executive officers and supply personnel inspected the billets the unit would occupy, inventoried furnishings, accepted lateral transfers of equipment, ordered the additional TOE equipment needed, and performed other administrative and logistical actions.

From 25 March through 22 April 1985, the selected officers and enlisted men attended the Light Leaders Course at Fort Benning. This course is primarily a leadership and "train-the-trainer" course, with more than half the instruction being conducted by the students. Its goal is to increase the leadership abilities and the proficiency of each student in methods of instruction and tactical battle drills. (See also "Light Leaders

\* NOTE: I would like to thank LTC Joseph C. Windle and CPT William B. Crews, formerly commanders of 2d Battalion, 32d Infantry and Company B of that battalion, respectively, for their assistance, insight, professionalism, and diligent efforts in drafting an earlier version of a similar manuscript based upon their own unit experiences.

I would also like to thank LTC Thomas J. Kelly, commander of the 5th Battalion, 21st Infantry for reading the draft of this article and offering cogent recommendations for improvement. My special thanks go to ISG Cleophus M. Childress, Company B, 5th Battalion, 21st Infantry, for reviewing this article from the NCO's perspective. One could not ask for a more professional, competent, and unwaveringly loyal First Sergeant.

Course," by Captain William D. Phillips, INFANTRY, January-February 1985, pages 35-37.)

Some intangible results of the course directly contributed to the battalion's development and cohesion. The shared stress, the high standards, and the inculcation of the "spirit of light infantry" from the Ranger instructors, forced each company's leaders to bond together, an action that definitely strengthened the company chain of command. It also gave the company commanders and first sergeants a chance to observe and assess the capabilities, strengths, weaknesses, and potential of their subordinate leaders.

(It is important to understand that this course is not conducted like Ranger School. There is no harrassment, each student wears his insignia of rank and is treated accordingly, and the company chain of command is further reinforced by its remaining intact throughout the course. A graduate of the Light Leaders Course is not only more aggressive, tough, and competent in soldier skills and tactical battle drills but also much more confident in his own training and abilities and in those of his leaders.)

Once back at Fort Ord, the battalion's in-house training intensified. The NCOs who had attended the Light Leaders Course taught tactical battle drills and other subjects to those who had not attended. The battalion developed a week-long course that stressed land navigation, physical training and confidence building, tactical battle drills, and the reinforcement of individual skills and leadership attributes. And during this period, barracks renovations and preparations were completed.

Selected chain-of-command members (battalion and company commanders, S-3, command sergeant major, first sergeants, and platoon leaders) and the battalion chaplain traveled to Fort Benning in late May to meet the new soldiers and their families, to give them an orientation on the Fort Ord area and the 7th Division, and to participate in the graduation ceremony.

The ceremony marked the successful completion of the demanding One-Station Unit Training (OSUT) and signified a soldier's transition from trainee to Infantryman. In addition,

each company commander was given his own time to conduct small but dignified ceremonies in which the Regiment's history, lineage, and honors were chronicled, and the significance and symbolism of the unit crest was explained. Then each soldier was presented with a packet containing division patches, unit crests, and the unit's Presidential Unit Citation.

## RITES OF PASSAGE

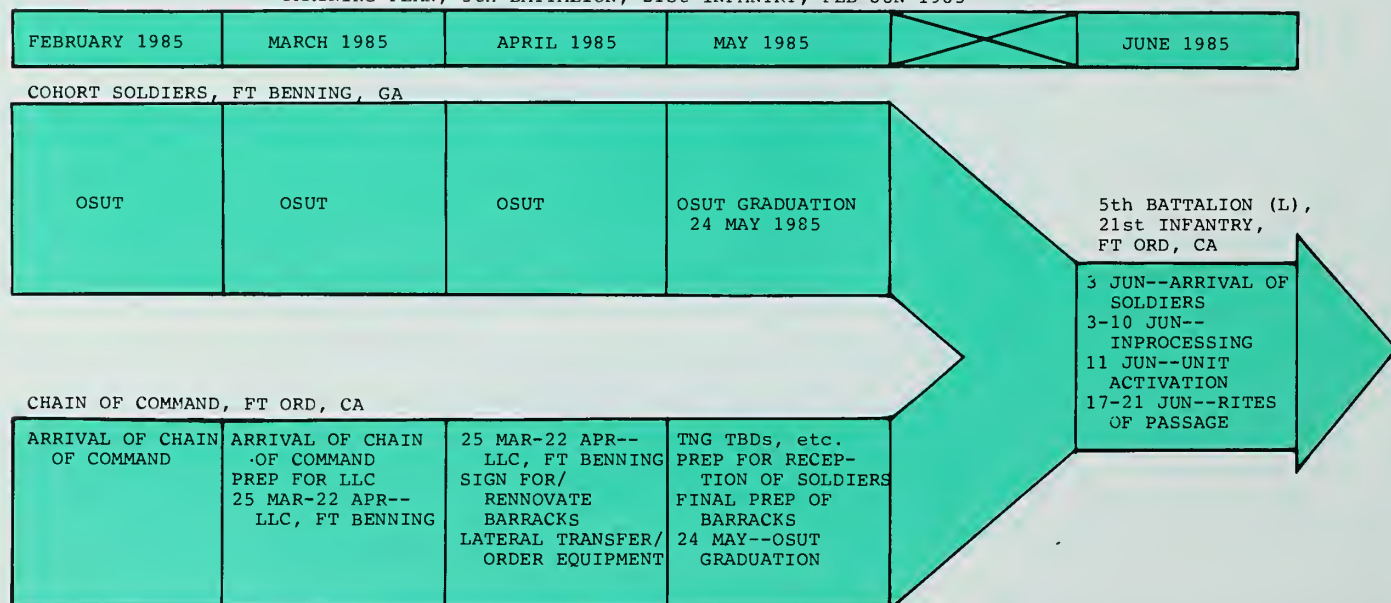
When the soldiers arrived at Fort Ord on 3 June 1985, the chain of command was totally prepared to receive them. A highly professional, effective, and efficient in-processing program was adhered to, and the actual activation of the battalion took place at a ceremony and review on 11 June.

From 17 to 21 June, the battalion participated in the Rites of Passage, which consists of five days of intensive training in individual and survival skills and adventure training conducted by a separate committee of NCOs, almost all of them Airborne Rangers. One of the major objectives of this course is to help soldiers make a mental transition to their new surroundings and to assimilate each of them into the division so that they will feel like an integral part of this unique organization. This also provides an ideal opportunity to start training new soldiers on field discipline—stand to, noise and light discipline, proper security at night, frequent maintenance of weapons, field hygiene, and a host of related subjects.

The course emphasizes team-building activities such as road marches, rappelling, bayonet assault courses, confidence and obstacle courses, and the like. These activities are not only fun, they also serve to strengthen the soldierly bonds within each squad. In effect, the course reinforces the NCOs' positions of authority and skill by having them conduct all unit instruction and movements.

The next step was the Light Fighters Course, held at Fort Hunter Liggett, an area of diverse terrain 86 miles south of Fort Ord. The primary purpose of this course, which is an annual requirement in the division, was to teach the soldiers

TRAINING PLAN, 5th BATTALION, 21st INFANTRY, FEB-JUN 1985





the squad and platoon tactical battle drills that the battalion's chain of command had learned in the Light Leaders Course.

The battalion's objectives for the course were to:

- Teach squads and platoons the critical skills they would need to become the best light infantry fighting force in the world.
- Develop its units into flexible, tough footmobile fighters capable of using their specialized training to aggressively exploit enemy weaknesses.
- Develop cohesive, high-spirited units capable of aggressive, independent combat action.
- Increase its ability to make the most of its combat power through surprise, stealth, and expert use of terrain and camouflage.
- Conduct the training in a realistic, tactical environment that applied an appropriate amount of stress. At least half the training was conducted at night.
- Increase its soldiers' confidence in their leaders. All unit instruction of critical skills were presented by the leaders who would lead the units in combat.

The course also provided time for individual squad leaders to be innovative and use their initiative, because of the wide diversity of training that was offered during the 19-day course. That training included a combat intelligence training course, combat fire base/night defensive position operations, rappelling/rope work, air assault and small boat operations, and realistic squad and platoon live fire exercises.

When the battalion returned from the Light Fighters Course, the units continued with multi-echelon training, completing squad ARTEPs in September, platoon ARTEPs in October, company ARTEPs in January, and the battalion ARTEP in April 1986. (The battalion ARTEP was originally scheduled for completion in February, but was pre-empted by other missions.) In accordance with doctrine, the squad ARTEPs were planned and conducted at company level and platoon ARTEPs at battalion level.

Although it is still too early for a conclusive assessment of the effectiveness of COHORT light infantry battalions in gen-

eral, and of the 5th Battalion, 21st Infantry training program in particular, some early assessments appear to indicate initial success.

One of these assessments, made by a social science analyst from the Walter Reed Army Institute of Research, commented on the "contagious professional integrity" and the "relaxed atmosphere" in the battalion. It further concluded that "COHORT provides a foundation on which exceptionally competent units have been and are being developed in the 7th Infantry Division."

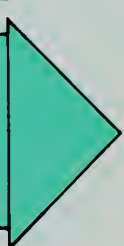
In another assessment, the Inspector General of the 7th Infantry Division administered a survey in 12 battalions to 223 soldiers (corporal/specialist 4 and below) in which each was asked to rate his unit's ability to perform in combat. The 5th Battalion, 21st Infantry showed a level of confidence substantially higher than the average for the division as a whole.

The battalion constantly makes its own internal assessments, including regular Battalion Training Management System sessions in which both officers and NCOs participate. From all these assessments, some initial observations can be made:

First, the squad is the most important element in a battalion. A squad must be given the time and resources it needs to conduct its own training. Though the planning for this training may be centralized, its execution must be decentralized so that it will be as effective as possible. Training managers must create an environment that permits freedom to learn, accepting an occasional mistake if an honest attempt has been made to complete the task or mission properly—and they must realize that learning takes place as a result. If a flawless execution of every mission is expected on every occasion, the probable result will be micromanagement in which, for example, the battalion commander over-supervises the company commanders and actually takes away their authority, and so on down the chain of command. Mistakes in this situation can lead to over-reaction, and the situation grows worse as the subordinate whose authority has been usurped becomes increasingly frustrated.

If the training is decentralized, a squad leader is challenged

TRAINING PLAN, 5th BATTALION, 21st INFANTRY, JUL 85-APR 86

JULY 1985	AUGUST 1985	SEPTEMBER 1985	OCTOBER 1985	NOVEMBER 1985	DECEMBER 1985
5th BATTALION (L), 21st INFANTRY, FT ORD, CA					
PREP FOR LFC SQD TNG 15 JUL-2 AUG LT FIGHTERS CRS FT HUNTER LIGGETT	2 AUG-COMPLETION LT FIGHTERS CRS INDIV/SQD/PLT TNG TRADOC TEST ON OSUT POI	10-24 SEP--SQD ARTEPs, FT H.L. AT LIVE FIRES SQD TNG PLT TNG	PLT TNG 16-29 OCT--PLT ARTEPs--FT H.L., CAMP ROBERTS MORTAR LIVE FIRES	PLT COMBINED ARMS LIVE FIRE EXERCISE POST GUARD FORCE LOCAL TNG AREAS	2-10 DEC 85--BN FTX, FT H.L. 16 DEC--BEST RIFLE CO COMP. 17 DEC-5 JAN 86 CHRISTMAS LEAVE PERIOD
JANUARY 1986	FEBRUARY 1986	MARCH 1986	APRIL 1986		
6-10 JAN--PREP FOR CO ARTEPs 12-17 JAN--CO ARTEPs, FT H.L. (ALSO CO CALFEX) SQD TNG PREP FOR DIVISION READY FORCE 1 MISSION	DRF1 MISSION PLT LIVE FIRE EX SQD/PLT TNG IN LTAs (ALSO RE- VERSE CYCLE TNG) CONSOLIDATED MOR- TAR FDC TNG CONSOLIDATED DRAGON TNG	SQD/PLT TNG 16-29 MAR--BN IS OPFOR AGAINST 9th REGT, FTX, FT H.L.	POST GUARD FORCE INDIV SQT TNG 21-25 APR--SQTs 26 APR-3 MAY--BN ARTEP/BDE CER- TIFICATION EX, FT H.L.		

1986/87

AMPHIBIOUS OPERATIONS COURSE  
EXPERT INFANTRYMAN BADGE TEST  
LIGHT FIGHTERS COURSE II  
FT HUNTER LIGGETT  
MULTINATIONAL FORCE AND  
OBSERVERS--SINAI



to train himself to the unit's standards so that he can effectively train his squad as well as maintain his own credibility. The squads develop a unique identity and a collective "we" attitude. Training standards are also invariably higher when a competitive spirit is created among squads.

In short, we need to train our squad leaders as best we can, then trust them to train their squads any way they deem appropriate so long as the unit's standards are met and the mission is accomplished.

As much individual training as possible should be conducted before collective training, with the NCOs involved, as they should be. The First Sergeant is the senior trainer in a company for individual training. Not only does this increase the NCOs' authority and responsibility, it also improves their positional authority, prestige, self-esteem, and confidence in the chain of command.

On the other hand, if a unit starts with collective training, the NCOs will probably perceive a lack of trust in their abilities and think that the officers want to take over their jobs. If this happens, it may be tough for the officers to regain the trust and confidence of the NCOs, and there may be serious repercussions later in the COHORT life cycle.

Even though safety is of paramount importance, it is essential that all training, especially live fire exercises, be conducted as realistically as possible. The 5th Battalion set a goal to conduct at least one live fire exercise a month to further build aggressiveness, tactical proficiency, self-confidence, and confidence in comrades and weapons. Tactical exercises that are conducted force-on-force add competition, encourage initiative in small-unit leaders and individual soldiers, and maintain the interest of the soldiers.

Another observation is that COHORT corporals are among the greatest strengths of the COHORT system. Because a rifle company does not have enough sergeants to serve as fire team leaders, it has to select about ten COHORT soldiers immediately to fill these vacant positions. As a result, these soldiers are designated "COHORT corporals," appointed acting corporals, and allowed to wear corporals' stripes.

These young soldiers are usually intelligent, motivated, willing to learn, and in outstanding physical condition. Their potential is unlimited. They are treated as NCOs, become important members of the chain of command, and are trained in the duties and responsibilities of NCOs. In addition, they receive more training in individual and collective tasks, so they can lead and train their own fire teams confidently and competently.

On the basis of its entire COHORT experience, the battalion has several recommendations:

- The Department of the Army must be selective about the NCOs it places in a COHORT unit chain of command and should evaluate demonstrated performance, leadership ability, and potential instead of levying certain posts or units for a required number of NCOs to be reassigned at a specific time to a COHORT unit. If a unit is tasked with providing NCOs for another unit, it is not likely to send its best soldiers.

- When a unit is scheduled to be activated, the soldiers who hold specific low-density MOSs—such as 71L, 75B, and 76Y (especially 76Y)—need to be among the first soldiers assigned

to the unit. These soldiers are needed to initiate and conduct all administrative and logistical actions before the COHORT soldiers arrive.

- Also before the COHORT soldiers arrive, all NCOs should either re-enlist or extend their enlistments to cover the entire COHORT life cycle. Re-enlistment regulations must be unwavering on this point, but they have not been in the past. The COHORT system is designed to improve stability and cohesion and to reduce personnel turnover, especially in the chain of command.

- The Army seems to have been merely paying lip service to the statement that officers are affected by the COHORT system. They really do not appear to be. We must also try to reduce personnel turnover among commissioned officers in a COHORT unit.

- Currently, the enlisted infantrymen in a COHORT battalion initially enlisted for three years plus the time required for OSUT, whereas the enlisted soldiers holding low-density MOSs initially enlisted for only three years. This means it is possible for the low-density MOS soldiers to reach the end of their enlistments about three months before the infantrymen and three months before the end of the COHORT life cycle. This situation warrants additional study.

- Senior leaders need to be aware that officers and NCOs carry a tremendous burden of responsibility, physical as well as mental, in a COHORT light infantry battalion and need to watch for leader "burn-out." There is nothing more demoralizing to an NCO who is working hard in a COHORT unit and spending half his time in the field away from his family than to be told that he is going to be stabilized at the same installation to go through a second COHORT life cycle.

In the past year, the 5th Battalion, 21st Infantry has trained light infantry battalion COHORT soldiers innovatively and with apparent success. The tie between leadership and training has been clearly demonstrated. The efforts of both the chain of command and the NCO support chain to improve leaders and replace those who seemed unwilling or unable to achieve and maintain the necessary high standards have paid tremendous dividends. The result has been cohesive, combat-ready squads, platoons, and companies made up of tough, skilled, aggressive, and dedicated infantrymen.

The essential element of success in this program has been COHORT. The individual replacement system will never permit the required excellence, and though the price of a COHORT battalion is high, it is not too high. The longer initial training time for a COHORT battalion will yield better results. The stability inherent in COHORT, plus dedicated and competent leadership and a well-planned, demanding, and superbly executed training program, are the essential elements for creating the finest light infantry in the world.




Captain Harold E. Raugh, Jr., commanded Company B, 5th Battalion, 21st Infantry at Fort Ord. He previously served in various platoon leader and staff officer assignments in the Berlin Brigade and the 2d Infantry Division. He is now attending the University of California at Los Angeles in preparation for an assignment to teach history at the United States Military Academy.



# COHORT

## COMPANY RECEPTION

LIEUTENANT MICHAEL C. CLOY

- 
- DAY 1** OSUT ARRIVAL  
BATTALION/COMPANY INPROCESSING
  - DAY 2** DIVISION INPROCESSING  
CHAIN-OF COMMAND BRIEFING  
ON-POST TOUR
  - DAY 3** SHOWDOWN INSPECTION  
CIF ISSUE  
VACCINATIONS
  - DAY 4** ADDITIONAL BRIEFINGS  
VEHICLE & WEAPON REGISTRATION
  - DAY 5** OFF-POST TOUR  
ARRIVAL CEREMONY  
CLOTHING SALE REFITTINGS

The Army's New Manning System has provided unique challenges for a company chain of command. For example, the organizational and rotational concepts outlined in Department of the Army Circular 600-82-2 have increased soldier-to-soldier and soldier-to-unit loyalty. But much of that loyalty and a unit's commitment to excellence depends upon how well the unit deals with one critical factor—"transfer turbulence." This factor includes the various complex environmental, personal, spiritual, and financial transformations that both an individual soldier and a COHORT unit must go through when changing from one duty station to another.

Unfortunately, transfer turbulence is only alluded to in the circular. And yet the manner in which a company chain of command confronts this turbulence will greatly affect the initial success of that unit in accomplishing its mission.

For many years now, the Army has recognized the need to ease the effects of this turbulence. The family sponsorship and Army Community Service programs are two examples of the Army's efforts. Most such programs, however, concentrate primarily on married personnel and hardly ever on the single soldier or the entire unit. This is a void that a COHORT company chain of command must fill.

The success of a unit's program depends upon how well it integrates the three critical stages of a COHORT company's reception—the preparation phase while the soldiers are still undergoing One-Station Unit Training (OSUT), the reception process itself at the home station, and the actions taken immediately after the reception process has been completed.

It is important to understand that these phases are interde-

pendent and that they will not necessarily follow strict schedules.

### Phase I. OSUT Overwatch

The moment an individual soldier raises his hand and takes his oath, the COHORT chain of command becomes inherently responsible for his reception into the service. At this time, the company leadership, with the First Sergeant's valuable experience, should begin to monitor the OSUT unit's progress from an "overwatch" position.

First, each soldier should receive a letter informing him of things he is most likely to be wondering about in regard to his new unit, his place in the unit, and his new station. This will give him a goal to reach for and will help prepare him to take his place in the unit.

Then the leaders should begin to monitor from a distance such information as the soldiers' performance, training, educational levels, GT scores, and medical, personnel, financial, and clothing records. This will enable the chain of command to forecast its own short- and long-range goals and to begin looking at potential leaders.

Coordination is an important aspect of this process. Close communication between the OSUT chain of command and the receiving unit chain of command is critical. An early professional rapport must be established between company commanders, First Sergeants, and executive officers. At least one command visit should be planned to the OSUT site to allow the unit's key leaders to check on the various issues. The visit will also allow the soldiers to take a look at their future com-



**While the new soldiers are undergoing their training, the unit's leaders should also be training.**



pany commander and First Sergeant. (It should be well planned; otherside, the unit's key leaders may discover, for example, that they have not been included on the OSUT training schedule.)

A personnel roster is probably the most valuable item the chain of command can obtain, because it often includes home of record, family and marital status, age, height and weight, educational level, and a variety of diagnostic and statistical data on each soldier. Any data not included on the roster should be requested. Leaders can use this data to prepare, well in advance, personnel readiness folders, assorted records, classes, weapon system assignments, and room assignments, as well as team, squad, and platoon membership.

While the new soldiers are still undergoing their training, the unit's leaders should also be training. Besides the obvious technical and tactical training and the SOPs that the commander must develop, he must also see that all of the unit's leaders will be ready to serve the soldiers and to ease the effects of transfer turbulence. This means arranging for instruction from both on-post and off-post soldier service agencies, and the instruction is best done by having a representative of each of the different agencies come to the unit and provide concise briefings (see Briefings and Appointments Checklist). This will give the leaders a fundamental working knowledge of these particular agencies. (Appointments must be made well in advance.)

Arrangements also need to be made to have some of these agencies brief the COHORT soldiers after their arrival. Question-and-answer sessions on such matters as finance, housing, and legal assistance will be valuable. Furthermore, they will enable leaders to identify any individual problems a soldier may have, and in turn will enable that soldier's first-line supervisor to demonstrate his ability to help solve the problems. Thus, the soldier will begin establishing confidence, loyalty, and trust in his leader.

At the same time, the unit's leaders need to develop their skills in counseling, listening, and leading. This is where many intrinsic COHORT problems can be avoided. The First Sergeant needs to develop a counseling SOP, and for the good of the unit, leaders with prior experience and skill in certain areas should be given the additional duties most closely related to those areas.

Finally, a massive repair and upkeep program should be started to prepare the soldiers' new home for their arrival. The program should concentrate on standard-of-living deficiencies in the barracks. The Directorate of Engineering and Housing should be contacted well in advance of the unit's arrival so that they can conduct structural, electrical, and plumbing inspections. (Hopefully, the previous unit will have initiated this action before closing out.)

### **Phase II. Reception**

Although Phase I is probably the most important, in that first impressions form a lasting foundation, Phase II is the most exciting, because this is when the unit "family" comes together for the first time.

The success of this phase may lie with one person—the squad leader. He is the one who should monitor the soldier's in-



## BRIEFINGS AND APPOINTMENTS CHECKLIST

### BRIEFINGS

Safety  
 Crime Prevention  
 Sure Pay/Finance  
 Housing  
 Family Support Group  
 JAG/Legal Assistance  
 Recreation Services  
 Army Emergency Relief  
 Army Community Services  
 Hospital  
 Defensive Drivers Course  
 Chapel  
 Military Courtesy  
 Legal Assistance  
 Alcohol and Drugs  
 Fire Prevention  
 Clothing Sales  
 Maintenance  
 SAEDA  
 Awards/Promotions  
 Key Control  
 Unit Leave and Pass  
 Reenlistment  
 Open Door Policy  
 Equal Opportunity  
 Hometown News Release  
 Commodity Areas  
 Chain of Command

### APPOINTMENTS

CIF  
 Central Enlisted Processing  
 Housing  
 Finance  
 Banks  
 Vehicle Registration  
 Defensive Drivers Course

processing checklist, and, as first-line supervisor, he is responsible for helping the soldiers make the transition from training to real soldiering (see Squad Leader's Checklist).

The reception and inprocessing should be allotted five working days on the training schedule. For example, the first day might be devoted to OSUT arrival and battalion/company inprocessing; the second day to division inprocessing (finance, housing, banks, enlisted records), chain-of-command briefing, and an on-post tour; the third to a showdown inspection (civilian and initial issue), CIF issue, and vaccinations; the fourth to soldier service agency briefings, chaplain briefing, JAG briefing, fire and crime prevention briefing, and registration of privately owned vehicles and weapons and high-value items; and the fifth to an off-post tour, an arrival ceremony, and clothing sale refittings.

Again, administrative and logistical support must be arranged well in advance. The records of the individual soldiers

## SQUAD LEADER'S CHECKLIST

NAME \_\_\_\_\_  
 CO \_\_\_\_\_ PLT \_\_\_\_\_ SQD \_\_\_\_\_

### Squad Leader's Initials

1. Sign in at battalion on DA Form 647-1 (if granted leave enroute).
2. Meet team and squad leader.
3. Secure government checks and excess cash in unit safe.
4. Issue individual barracks items.
5. Inventory: ID card, ID tags, personal issue items.
6. Secure personally-owned weapons in arms room.
7. Register POV.
8. Chapel briefing.
9. Class A turn-in to cleaners (optional).
10. Issue meal card.
11. Company chain-of-command briefing.
12. Mark high-value items.
13. Squad leader counseling.
14. Orientation of company/battalion area to include:
 

a. Bn Hqs building	f. Barber shop/PX annex
b. Dining facility	g. Formation site
c. Supply room	h. PAC
d. Orderly room	i. S-4
e. Phone booths	j. Company dayrooms
15. Safety briefing.
16. Register personally-owned weapon (if applicable).
17. Battalion aid station (shots and weigh-in).
18. Central inprocessing.
19. TA-50 issue (CIF).
20. Property accountability briefing.
21. DDC (if applicable).
22. On-post/off-post tours.
23. Sure-Pay/finance/travel processing.
24. JAG briefing.
25. Arms room (weapon card).
26. Crime prevention briefing.
27. Family support group/housing briefing (married soldiers only).
28. Re-up card filled out.
29. NBC mask fitting and issue.
30. Showdown inspection (DA Form 3078). Uniform fitting inspection.
31. Personal readiness folder prepared.
32. Extra ID tags made.

should be picked up on OSUT graduation day and handcarried by a senior NCO to the unit. These records must be immediately sorted for unit inprocessing, while APFT scores, rifle marksmanship, specialty training (11C, 11H), orders, and the like should be filed for the unit's training records. Financial, medical, dental, clothing, and personnel records should be delivered to their respective battalion, brigade, and division agencies. This will allow these agencies to screen and pre-





Unity in combat will make a unit more effective.

pare for the day the soldiers of a COHORT unit will arrive on their doorsteps for inprocessing.

Uniforms and personal belongings should be inspected for accountability so that the unit supply sergeant can compare and validate the OSUT initial issue and spot potential shortcomings according to DA regulations. Uniform fittings can also be free of charge if the need for them is identified early.

Family support groups both in the company and outside it are a great help. Married soldiers and those considering marriage should be encouraged to participate in these groups and to promote them. Whether the wife is able to arrive with her husband or not, a spouse military orientation program is crucial to military family orientation. This program can also help with on- and off-post tours. Army Community Services packets, with personalized letters explaining predeployment and deployment issues, can reinforce the reality and the challenges of being Army wives.

### Phase III. Action and Reaction

The third phase of COHORT reception is the hardest, because it is dependent upon the success of the first two phases and also because it never ends. It is at this point that the unit

develops its character, its charter, and its course. During this period, the COHORT soldiers are trained to be loyal to their fellow soldiers and their unit, and to believe that unity in combat will make the unit more effective.

This concept of unity can also work in reverse, however. Certainly COHORT soldiers often do good things in groups, but they can also do *bad* things in groups. In garrison, this seems to be partly because of peer pressure and partly because of an inability on the part of certain soldiers to adapt to the turbulence of the transfer from OSUT to COHORT.

The primary purpose of this phase, then, is to continue to provide a structure for *good* performance. The atmosphere should be hard but fair. The differences between the "real" Army and the basic training one should be continually explained at team and squad levels. Gradually, advanced privileges should be allowed, such as days off if the unit has no AWOLs, no drunk driving charges, or no drug offenses. Good behavior and performance should be openly encouraged and supported. Incentives should be created for soldiers, elements, and the unit as a whole when responsibility is accepted, and someone should be sure to follow up on the incentive program.

At the same time, the soldiers must be forced to take immediate responsibility for bad checks, physical security violations, and the like. Military Police canine teams should be asked to search the barracks, with the soldiers watching. A company-wide urinalysis program, including the chain of command, should be conducted. Although the company's leaders should leave some room for failure on the part of the soldiers, they should not allow habitual irresponsibility.

It helps if a controlled means of expressing problems and complaints is developed. "Soldier sensing" sessions should be scheduled to give the chain of command an immediate and controlled way of getting feedback on unit morale. A company letter should be prepared for parents and spouses, explaining the unit and their sons' or spouses' jobs in it. In general, the soldier and his family should be given gentle but firm guidance on how to act and react, on and off duty, to the military life.

In addition, soldiers should be insulated from the effects of other more experienced sister units, and they should be prepared for the intensive, sequential train-up cycle they are getting ready to undergo.

These are the challenges of being in the chain of command of a COHORT unit from the beginning of the soldiers' enlistment. Teaching, training, leading, caring, setting the example, and controlling the environment are all part of one integrated task. If the unit chain of command exercises forethought and takes the initiative, then the turbulence of going from OSUT to a COHORT unit can be lessened, and the unit will be on its way toward becoming combat effective.



Lieutenant Michael C. Cloy was executive officer of Company A, 4th Battalion, 9th Infantry, 7th Infantry Division (Light), during the company's reception process and is now support platoon leader in the same battalion. He is an ROTC graduate of the University of Southern Mississippi.



# TRAINING NOTES



## Light Infantry 60mm Mortars

CAPTAIN MICHAEL T. NATUSCH

Light infantry units rely on soldier power—well trained troops who use the indirect approach. Much of the training for light units is structured on the assumption that their soldier power will be used in a low intensity conflict. These units expect to operate in an environment of rugged, restricted terrain, and they expect to have air superiority. They do not expect to fight a linear battle but guerrilla forces who fight in mostly squad-to-platoon size elements (sometimes up to battalion size). The enemy may be in any direction, and light infantry soldiers will strike at him accordingly.

As a light infantry company commander prepares for an offensive mission, he must consider several things that could affect his 60mm mortars. First, he has six men in his mortar section—a staff sergeant section leader, a sergeant squad leader, two gunners, and two ammunition bearers—and he is concerned with how best to use the combat power these soldiers and two tubes can give him. The availability of mortar rounds and security for the company's only organic indirect fire support element are of equal concern. And where the terrain would totally or partially restrict vehicle traffic, the economical use of his mortar rounds becomes critical. The commander must also have a thorough fire support plan that includes the attached fire support team's role in calling for fires and in integrating all available fire support.

Many units in addressing these concerns have devised innovative techniques. This is the way the companies of one battalion use their indirect fire systems.

In the order of march, the mortar section travels between the second and third platoons. When a target is identified, the forward observer calls the mission over the mortar section frequency, and the crews go into action. The first gun is set up in the hand-held mode, and the squad leader uses his M2 compass and firing table to execute the direct-lay mission. (Of the means of indirect fire support available to the infantryman, this system is the fastest.) As a company's soldiers engage enemy targets, they are assured by the knowledge that the mortar rounds they can hear exploding out front are friendly, while the enemy soldiers experience some discomfort in finding out that indirect fire is already being adjusted upon them.

### HANDHELD

The hand-held 60mm mortar, however, is not nearly as accurate as the bipod-mounted mortar, nor does it have as much range. For this reason, while the first gun operates in the hand-held mode, the second gun sets up in the bipod mode. The section leader computes the gun data, and the section is quickly able to deliver its most accurate fire. As soon as the second

gun is operating, the first also sets up in the bipod mode.

The availability of mortar rounds to the mortar section, of course, is crucial to its ability to deliver effective fire support. As there are no organic vehicles in the company, the task of transporting the rounds falls upon the soldiers. In his mission planning, therefore, the commander must decide how many rounds the company will carry. His decision is affected by his mission, the distance and terrain he will cover, the availability of alternate fire support assets, and the enemy situation. If he decides on carrying a large number of rounds, each soldier may find himself tasked to carry two mortar rounds, which will add roughly eight pounds to his load. Any decision to exclude certain soldiers from this task—M60 machinegunners or radio-telephone operators—must be made by the commander. The mortar section itself will carry at least six rounds that will be available for immediate use by the gun assigned to fire in the hand-held mode.

When a fire mission is called, the platoon that follows the mortars in movement must move to where the 60mm mortars are set up and off-load its mortar rounds. This platoon is also responsible for the security of the mortar position if that mission is determined necessary by the commander or his pre-established designee—executive officer, platoon leader, or first sergeant.



Upon making contact, the soldiers in the first two platoons in the formation drop their rucksacks and immediately begin fire and maneuver. The first sergeant and the executive officer must ensure that the mortar rounds get to the mortar section as needed and, after contact has ended, that the mortar rounds are redistributed as the company consolidates and reorganizes. If the supply of mortar rounds has been depleted, the company must request a resupply of them. In the light infantry, however, this will depend upon the availability of helicopter support or upon the company's accessibility by wheeled ve-

hicles. At times, these prospects may not be favorable, and this demonstrates how crucial planning is in preparing for a mission.

In most situations the mortar section travels with the company's main element. Although situations may arise in which a commander decides to move his mortars by displacement, the six soldiers in the section in this scenario (or three, if displacing by gun) will be highly vulnerable. The section is authorized only one PRC-77 radio, which makes displacement by gun more difficult. The section leader must identify firing positions while

moving, similar to the way a patrol leader identifies rallying points. When contact is made, the section must quickly go to that location and set up. In deciding whether or not to use displacement, the commander must weigh the mortar section's possible difficulty in navigating in the terrain, its vulnerability, and its access to a supply of mortar rounds.

The fire support team (FIST) attached to the company plays an important role in helping the commander use his 60mm mortars efficiently and effectively and in drawing upon other available fire support to augment his combat assets. The company fire support officer (FSO) must keep the commander informed of the status of 60mm mortar ammunition, whether the mortars can set up in a particular location, and whether nonorganic fire support assets are available. He must also keep the battalion fire support officer (FSO) informed. The battalion FSO has a key responsibility to help the battalion commander use and allocate battalion assets.

On missions that require the company to go beyond the range of the battalion's 81mm mortars or that of any support artillery, the management of the 60mm mortar ammunition is of great importance, especially if the mission and the enemy situation indicate that heavy contact is likely. Here the battalion mortars provide a larger support commitment to the company before it leaves their range fan. If chance contact is made and indirect fires are needed, the FIST will call on the 60mm mortar section for fire. When the company FSO hears the call for fire, he will relay the call to the battalion mortars, and they will take over the mission as soon as they can deliver rounds. This technique can reduce the number of 60mm rounds to be expended, along with the need for a resupply. This often allows the company to continue to go beyond battalion fire support range and still maintain the number of 60mm rounds required to conduct its mission.

This procedure is also followed when a company's mortars are not able to fire immediately because of overhead canopy or restrictive terrain. As the company moves, its FSO keeps track of the 60mm mortar section's ability to fire by using a green, amber, red system. Green indicates that the mortar section is set up or could



7th Infantry Division soldier lays 60mm mortar.



set up where it is; amber indicates that the section can be set up and firing within ten minutes; and red indicates that the section will not be able to fire within ten minutes. The mortar section sergeant keeps the FSO abreast of his section's status, and the FSO keeps the company commander and the battalion FSO informed.

The battalion mortars monitor and keep track of the status of each company's mortar section. This allows the battalion mortars to set their guns to respond quickly to the unit that is in the least favorable situation. The battalion commander, through his FSO, determines priority when the battalion mortars are in general support and more than one unit is in a red or amber status.

Even when a company is beyond the range of nonorganic fire support, the green, amber, red system should still be used. If a company's mortars are in red status and out of range of nonorganic fire support, they may still be within the range of another company's mortars. By keeping track of the status and location of each company, and of the range of each company's mortars, the battalion FSO can

significantly increase the battalion's ability to meet a company's need for indirect fire.

When a company is nearing an objective, is in red status, and out of range of another company's mortars, the battalion commander may elect to have the company stop, which allows him to position another company so that additional indirect fire support is attainable. This could prevent a unit from making enemy contact when it has no indirect support available.

## FIRE SUPPORT

The FSO keeps track of the availability of all organic and nonorganic fire support assets. He can direct the fires of the company and battalion mortars on single or multiple targets as they are needed. He can integrate any supporting artillery to further ensure timely, adequate support.

When the battalion has close air support available, the company mortars have the capacity to spot targets for the close support aircraft. In terrain where landmarks

are not distinct, a company commander can guide the aircraft by firing HE rounds at the target. This technique has proved effective and easy to do. It allows a company to be well beyond range of all nonorganic indirect fire support and still deliver a devastating blow to the enemy.

At first glance, a light infantry company commander may conclude that his two 60mm mortars are not sufficient to give him effective indirect fire support and that resupply constraints will further reduce their effectiveness. By concentrating on what his equipment will allow, however, and by conducting in-depth mission analysis and planning, the commander's capacity to use his own indirect fire support to defeat an enemy, and to save his soldiers' lives, will be dramatically increased.



**Captain Michael T. Natusch**, when he wrote this article, was assigned to the 5th Battalion, 21st Infantry. He has served in the 7th Infantry Division (Light) as company commander, battalion S-3 air, and assistant G-3 training officer.

# Live Fire Drills

**CAPTAIN WILLIAM B. CREWS  
LIEUTENANT RANDY D. LUTEN**

Historically, the unit that fires first in an engagement has an advantage, and the unit that fires first and most accurately probably has assured victory. Although this has been known for over 40 years, the Army has done little to train units to gain this initial accurate firepower.

One of the critical reasons that this training is not done is that units tend to draw distinct boundaries between types of weapon training—range firing, MILES/tactical training and live fire exercises.

There are several reasons for this, but the primary ones are a perception (as opposed to knowledge) that Army Regulation 385-63 prohibits certain exercises; a “we’ve never done it that way” attitude; and a belief, usually well-founded, that training inspectors and others who happen by will not understand anything different.

As one watches a unit go through its training, several observations become readily apparent. During range firing,

soldiers move in orderly lines, are supervised by NCOs who often are required to wear color-coded helmets, and take orders from someone in a range tower by way of a public address system. (In this article “range firing” refers exclusively to 10-meter, 25-meter, field fire, known distance, and record fire ranges.)

During tactical training, units move in tactical formations, there is little direct control over the soldiers, and commands are shouted above the noise. During live

## FIRING DRILLS

### DRILL 1. Drop and Engage.

**Ammunition:** Five rounds of 5.56mm ball.

**Starting Position:** Soldier faces down range with weapon on SAFE and held at port arms.

**Drill:** The target is raised. The soldier drops to the ground, places the selector switch on SEMI, and engages with five rounds of rapid fire.

**Time Limit:** Five seconds from the time the target first appears.

**Accuracy:** All five rounds on the paper holding the silhouette or the silhouette itself. (This standard is essentially that of placing suppressive fire on a target.)

### Drill 2. Drop, Roll, and Engage.

**Ammunition:** Five rounds of 5.56mm ball.

**Starting Position:** Same as Drill 1.

**Drill:** The target is raised. The soldier drops to the ground, rolls left or right, places the selector switch on SEMI, and engages with five rounds of rapid fire.

**Time Limit:** Same as Drill 1.

**Accuracy:** Same as for Drill 1. (The same time is allowed because Drill 2 should not be trained until Drill 1 has been mastered.)

### DRILL 3. Roll, Rush, and Engage.

**Ammunition:** Two magazines each of five rounds of 5.56mm ball.

**Starting Position:** Prone unsupported firing position, weapon on SEMI.

**Drill:** The target is raised. The soldier fires five rounds of rapid fire, places the weapon on SAFE, changes magazines, rolls left or right, then rushes a short distance, drops to the ground, places the weapon on SEMI, and engages with five rounds of rapid fire.

**Time Limit:** Ten seconds from the time the target is raised.

**Accuracy:** Same as for Drills 1 and 2.

### DRILL 4. Buddy Team Roll, Rush, and Engage.

**Ammunition:** Two five-round magazines each.

**Starting Position:** Same as for Drill 3.

**Drill:** Buddy team starts as in Drill 3. Two targets are raised. When the targets appear, Soldier 1 engages his target, and Soldier 2 rolls, rushes, and engages his target. When Soldier 2 begins firing, Soldier 1 executes the drill.

**Time Limit:** None.

**Accuracy:** Same as previous drills.

fire exercises, depending on the unit, the soldiers may again move in tightly controlled formations, under close supervision, and take orders from an administrative NCO who sometimes is equipped with a bullhorn. On more realistic live fire exercises, soldiers move hesitantly, usually use improper movement techniques, and often simply expend rounds without aiming. In many cases, if their weapons malfunction, they are at a total loss as to what to do.

By divorcing range firing from tactical training, therefore, we have produced a situation in which a satisfactory performance in live fire exercises is difficult to attain and success in a firefight would be

problematic at best.

There is a method of bridging the gap between range firing and tactical training. This proposed method consists of four drills as shown in the box. The drills are designed to be conducted on a known distance (KD) range. The distance used is optional, but 300 meters is the most effective. The KD range was chosen because the silhouette is mounted on a large sheet of target paper, which provides feedback to the trainer on a soldier's misses and on the dispersion of his rounds. (A field fire and record fire range can be used instead, but these ranges have only limited means of determining whether a soldier is missing a target because of a

poor zero or because of a poor shooting technique.)

These drills should be expanded as the soldiers become more proficient. For example, dummy rounds can be added to each magazine to ensure stoppages; the number of magazine changes can be increased (using a three-round and a two-round magazine instead of a five-round); and the MOPP level can be increased until the drills are conducted in MOPP 4.

There are several immediate payoffs to this program. First and foremost, this is safety training. It teaches soldiers to move with loaded weapons under tactical conditions and to change magazines and reduce stoppages without supervision.

## TECHNIQUE

Second, the program teaches the correct technique to be used in combat, and it does so in a sterile environment where errors can be readily identified. It reinforces the need for accuracy and the use of the steady-hold factors. Suppressing targets at 300 meters after rolling or rushing is infinitely more difficult than a similar feat on a qualification range.

The third, and by no means least, payoff is in soldier confidence. A soldier learns that he no longer has to depend upon instructions from a tower, or from an NCO in a white helmet, to be able to change a magazine, move with a loaded weapon, or reduce a stoppage. He also learns that his fellow soldiers have the same abilities. During live fire this translates into swift, confident movements instead of hesitancy and inertia.

While this program is not a cure-all, it is an indispensable phase in a unit's transition from tactical training with blanks to tactical training with live ammunition.

**Captain William B. Crews** served in the 7th Infantry Division (Light) as a brigade assistant S-3 and as a company commander in the 2d Battalion, 32d Infantry. He is now an assistant Inspector General, U.S. Army Recruiting Command.

**Lieutenant Randy D. Luten** is assigned to the 2d Battalion, 32d Infantry, 7th Infantry Division (Light), where he has served as a light infantry platoon leader and a company executive officer.



# LRSU Course

WILLIAM LYDE, JR.

The AirLand Battle demands that human intelligence always be available to commanders so they can maneuver their units and put their firepower on target. The training of soldiers to man the Army's new long-range surveillance units (LRSUs) in our light and heavy divisions and in our corps is a major step toward providing that intelligence capability.

The initial LRSU program of instruction was developed by the U.S. Army Infantry School in 1985 and was used in March 1986 to teach an eight-week pilot course at the John F. Kennedy Special Warfare School.

Now, the Infantry School is offering a five-week train-the-trainer LRSU course at Fort Benning for Active Army units and has developed a separate program for Reserve Component units. The RC program includes home-station drills and a two-week phase at Fort Benning.

The five-week course is designed to train small groups of selected LRSU personnel in advanced technical surveillance, reconnaissance and communication skills, and mission-specific operation procedures (see Program of Instruction). With these skills, they will be able to infiltrate and move within a tactical area of operations, to conduct reconnaissance and surveillance, and to report intelligence information in support of division and corps operations.

In small classes—31 to 36 soldiers—the attendees receive advanced instruction in hands-on, performance-oriented training that includes strenuous field training exercises over varied terrain and with differing threats. Intelligence and communication personnel are also included so that the complete intelligence-gathering team can be trained together. This integration of key personnel is essential to the fielding

and implementation of a LRSU team.

The instructors for the course are from the Ranger Department of the Infantry School. In addition to being both airborne- and Ranger-qualified, these instructors have also completed training with long-range surveillance units.

The training days are long and tough, both physically and mentally. The students are graded on their abilities throughout the course and must pass a

final comprehensive examination at the completion of the training program.

Reserve Component personnel attend six weekend drills at their home stations before attending the two-week phase of instruction at Fort Benning. During those two weeks, a unit's leaders will receive essentially the same training that students in the active component course receive during their last two weeks of training.

To be chosen to attend the course, an

## LRSU PROGRAM OF INSTRUCTION

	Hours		Hours
<b>COMMAND AND CONTROL</b>		<b>THREAT SUBJECTS</b>	
Command and Control	6.0	Missile System	2.0
History, Organization, and Mission of LRSU	2.0	Motorized Elements	2.0
	8.0	Tank Elements	2.0
		Artillery Elements	2.0
<b>RECONNAISSANCE OPERATIONS</b>		Special Equipment	2.0
Infiltration/Exfiltration Exercise	34.0	Transport/Armored Vehicles	2.0
Surveillance Exercise	3.0	Installations and Units	2.0
Planning/Isolation	25.0	Type Aircraft	2.0
Caching	2.0	Surveillance Electronic Equipment	2.0
Patrolling Activities	7.0	Operations/Identification and Reporting	4.0
Movement	6.0		22.0
Immediate Action Drills	1.0		
Survival/Field Craft	4.0		
	82.0	<b>COMMUNICATIONS/ELECTRONICS</b>	
<b>COMMAND POST EXERCISES</b>		Communications Procedures	4.0
Command Post Exercise I	48.0	Radio Set AN/PRC-77	4.0
Command Post Exercise II	72.0	Radio Set AN/PRC-70, AN/PRC-74B, and AN/PRC-104	8.0
	120.0	Digital Message Device Group	4.0
<b>FIELD TRAINING EXERCISES</b>		Generator G-76	.5
Field Training Exercise I	72.0	Transmission/Messages	1.0
Field Training Exercise II	144.0	Encryption	7.5
	216.0	Antennas	4.0
			33.0
<b>LAND NAVIGATION</b>		<b>STUDENT EVALUATION</b>	
Aerial Photograph	2.0	Physical Fitness/Combat Water Survival Test	4.0
Applied Map Reading	3.0	Comprehensive Examination	4.0
Land Navigation Exercise, Day (Individual)	8.0	Intelligence/Security Examination	2.0
Land Navigation Exercise, Night (Individual)	8.0	Dianostic Map Reading Examination	2.0
	21.0	Communications Examination	1.0
			13.0

### LRSU CLASS DATES

<u>Class #</u>	<u>Report Date</u>	<u>Graduation Date</u>	<u>Unit</u>
1-87	06 Oct 86	10 Nov 86	3 ID 7 ID 82 ABN 25 ID
2-87	10 Nov 86	15 Dec 86	V Corps
3-87	05 Jan 87	09 Feb 87	VII Corps
4-87	09 Feb 87	16 Mar 87	9 ID 101 AA 8 ID
1-87 (RC)	21 Mar 87	04 Apr 87	I Corps (RC)
2-87 (RC)	11 Apr 87	25 Apr 87	III Corps (RC)
3-87 (RC)	16 May 87	30 May 87	35 ID (RC) 40 ID (RC) 29 ID (RC)
4-87 (RC)	06 Jun 87	20 Jun 87	50 AD (RC) 38 ID (RC) 49 AD (RC)
5-87 (RC)	11 Jul 87	25 Jul 87	28 ID (RC) 26 ID (RC) 42 ID (RC) 47 ID (RC)
5-87	10 Aug 87	14 Sep 87	3 ID (REPL) 7 ID (REPL)
1-88 (RC)	03 Oct 87	17 Oct 87	82 ABN (REPL) 25 ID (REPL) I Corps (RC) (REPL) III Corps (RC) (REPL) 35 ID (RC) (REPL) 40 ID (RC) (REPL) 29 ID (RC) (REPL)

applicant must meet the following prerequisites:

- Must be a volunteer, male, officer or noncommissioned officer, Active Army or Reserve Component.
- Must be assigned to (or on orders for assignment to) a long-range surveillance company or detachment to serve as company or detachment commander, opera-

tions officer, surveillance platoon leader, First Sergeant or detachment sergeant, surveillance team leader, G-2 representative, communication officer, intelligence officer, or intelligence NCO; or may be a selected member of a base radio station communications staff.

- Must be airborne-qualified or Ranger- or Special Forces-qualified. (In

addition to soldiers currently working in MOS 18, "Special Forces-qualified" also means a soldier who has received SF training but who may not have worked in or been awarded MOS 18.)

- Must undergo a psychiatric evaluation conducted by a qualified psychiatrist, including the Minnesota Multi-Phasic Inventory (MMPI) and an Intake Psychiatric History Mental Status Examination.

- Must have a good performance record with no history of drug or alcohol abuse.

- Must be currently qualified with the M16A1 rifle.

- Must have a physical profile of 111111.

- Must have a valid physical examination on record upon reporting to the course.

The divisions and corps that are to receive LRSU training in Fiscal Year 1987 are shown on the accompanying schedule. As the schedule indicates, once the units have received their initial training, the training of replacements will begin.

There is no single project at the Infantry School in which more important gains in combat capability are being made for so little expenditure of resources.

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**William Lyde, Jr.**, is manager for the Long Range Surveillance Unit Course, Course Development Division, Directorate of Training and Doctrine, U.S. Army Infantry School.

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# Flag Signals

**CAPTAIN EDWIN L. KENNEDY, JR.**

Command and control of the battlefield today presents a number of problems for maneuver element commanders. A unit's ability to communicate has been expanded by the many new types of radio equipment available down to squad or vehicle

level. But this communications strength also represents a potential weakness in our command and control structure. Enemy radio-electronic warfare capabilities include an assortment of ways to disrupt our communications and thereby

to disrupt control. The destruction of communications systems by electromagnetic pulse (EMP) is also a possibility that must be considered.

How can we counter the enemy's electronic warfare capability or our complete



loss of communications due to EMP in a conventional environment? Perhaps some of the problems can be solved by using *auftragstaktik*, or mission orders, which express the commander's operational as well as tactical intent. This would allow subordinate units to continue their missions according to their analysis of METT-T—mission, enemy, troops, terrain, and time—with the emphasis on mission.

The flexibility needed to react to tactical situations and retain communications and control is still possible, however, through the use of other signal communication procedures coupled with good training and SOPs at company level.

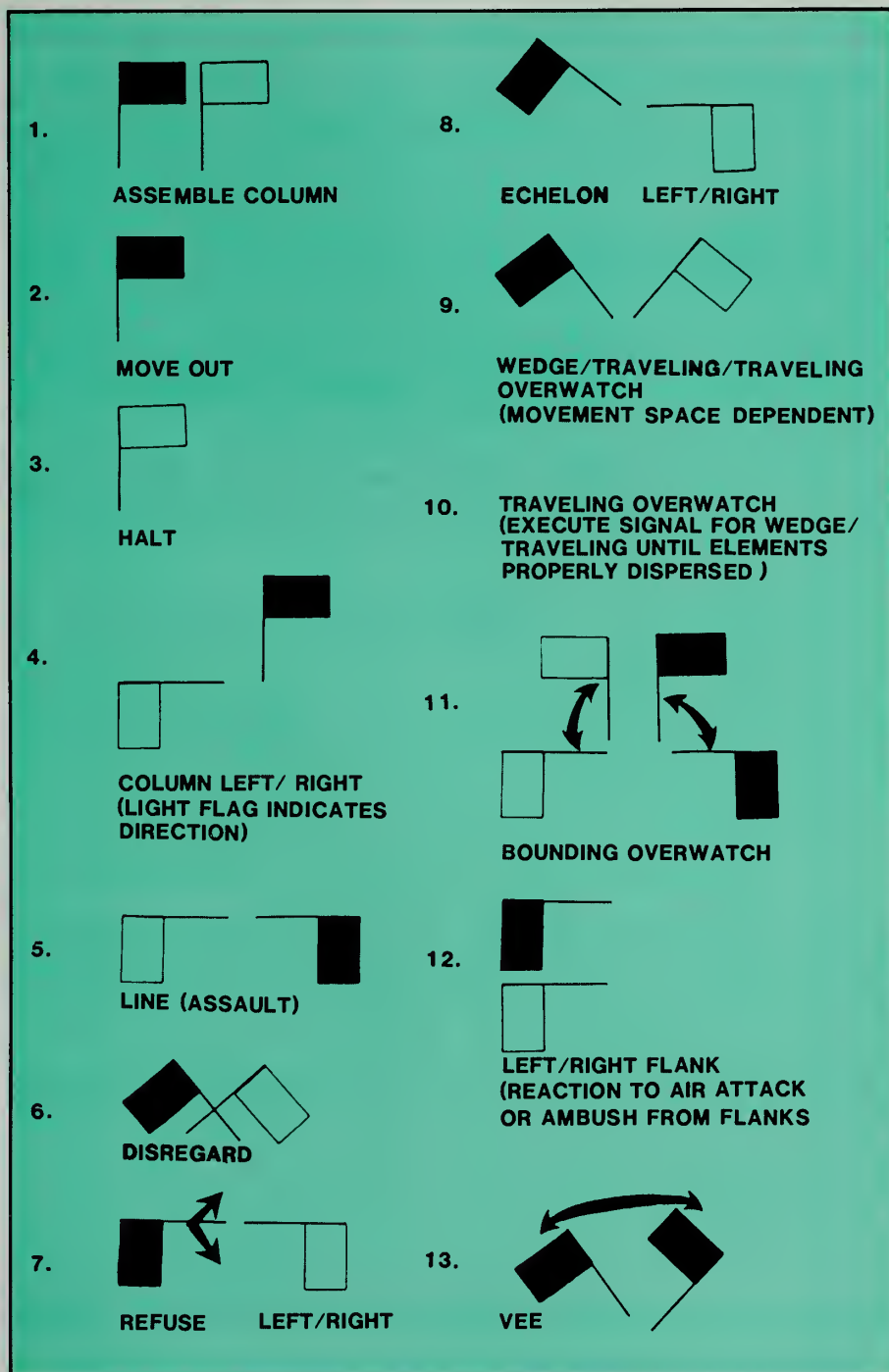
Among these other methods of signal communications are visual signals such as hand-arm and flag signals. Hand and arm signals are standardized for mechanized units in Field Manual 21-60, but they are not always appropriate for use over extended distances. The use of flag signals, though, can lead to a solution for communication during daylight.

## PROBLEMS

There are several current references on tactical flag signals—FC 7-7J (April 1985), The Mechanized Infantry Platoon and Squad (Bradley); FM 17-98, Army 86 Scout Platoon; and FKG 17-42-2, Standard Arm and Hand Signals for Track Vehicle Driving. But several problems arise when using these different references. They often show different signals for the same formation or movement technique, and they call for flags of three different colors. This adds to the problem of training and standardization. Aside from that, flag sets containing the three flags of the proper color, more often than not, seem to be difficult to obtain.

What is needed is an easier way to communicate during daylight by flag set and also to train subordinates in their use. There are two tentative solutions—continue with one of the existing three or more flag systems by standardizing it and making the flags easier to obtain, or devise and adopt an easier system.

One such easier system is proposed here. This new flag signal system offers



several advantages: It is easy to learn; it can be used with cross-attached units that have different flag sets; it eases the requirement to provide different colored flags; and it is designed to be used with current armor and mechanized infantry formations and movement techniques.

The new set of flag signals is based not on specific colors but on two flags, one dark and the other light. (The flags can be of any two colors so long as they are discernable as dark and light.) The commands they indicate (as shown in the dia-

gram) are a compilation of formations and movement techniques used by both armor and mechanized infantry. Supplemental instructions such as close or open column can be given by hand-arm signals.

To be effective, the flag signals must be relayed between vehicles. In M113-equipped units, air guards must be especially watchful for signals being sent forward. In armor and Bradley-equipped units, the loader/gunner must observe to his assigned security zone (the rear of the

tank or fighting vehicle) and relay signal information to the vehicle commander.

In tactical situations it may not always be possible to observe the signaler. In these cases, the *auftragstaktik* training and SOPs take effect. A short radio message by the signaler, for example, can be used to indicate a signal is about to be sent. Such a message might be as follows:

“A-26 this is K-09, Flag Over!”

“K-09 this is A-26, Roger, Out.”

A-26 would then proceed to a point from which he could observe K-09. This might only require that A-26 give his attention to K-09 when battlefield confusion has intermixed vehicles so that the leaders are not easily recognizable.

Even when the flags cannot be used in a tactical situation—because of obscurations or vegetation, for example—they can be used for simple messages during

non-tactical road marches or administrative moves to reduce radio traffic and the inherent burden on the commander's net.



**Captain Edwin L. Kennedy, Jr.**, a 1976 graduate of the United States Military Academy, is an ROTC instructor at Texas A and M University. He has attended the Israeli Armor Corps Commanders Course and the Infantry Officer Advanced Course.

## Emotional First Aid The Commander's Role

MAJOR GREG LANDE

The Israeli Defense Force (IDF) learned a painful lesson in the 1973 Mideast war. During the initial days of the battle, the IDF had a large number of combat psychiatric casualties (CPCs). After the war, in an attempt to reduce the number of CPCs, the IDF embarked on an ambitious training program, which it has continued to the present time. Embodied in the program is the belief that unit commanders can greatly influence the recognition, early treatment, and, ultimately, even the prevention of such casualties.

Commanders become natural allies of mental health practitioners in the prevention of psychiatric casualties because of their need to be keen observers of their soldiers' performance. Intuitively, most commanders know that, in any situation, whatever behavior is expressed is a function of the interaction between a person's characteristics and his environment. In a major conflict, the environment will generally be fixed. In other words, it will always be chaotic, turbulent, and frightening. Learning how individual soldiers may respond in such an environment and how they might be helped to cope with

it can be of great help to a unit commander in his manpower retention efforts. Accordingly, all unit commanders must learn to recognize, treat, and prevent combat psychiatric casualties.

The first task in realizing such a goal is to remember that there will be normal behavioral responses to a major conflict. Normal signs and symptoms might include anxiety, depression, a fast heart rate, rapid breathing, shaking, sweating, and incontinence. Such symptoms will not interfere with an individual's ability to function as a soldier, however, and it is important that these normal responses not be over-interpreted.

### NORMAL

A soldier who is having a normal response to the stresses of combat can still do his job. He will not show uncertainty in taking orders, protecting himself, looking after his buddy, or performing other required tasks. Duty impairment, therefore, becomes one criterion that distinguishes a normal response from a more disabling one.

In explaining the causes of the more disabling response, an analogy may be helpful. As the stress load increases, similar to the way the electrical load in a house sometimes increases, a person's "emotional circuit breaker" may "trip." The person is more complex, however, in that the "amperage" of the circuit breaker varies for each individual. But the purpose of the circuit breaker in both cases is the same—to protect the system from burnout. Another important feature of a circuit breaker is that it is designed to be reset.

Two examples of typical CPCs will help clarify the identification of a tripped emotional circuit breaker. One soldier, a driver, becomes increasingly more fearful, irritable, and tense. He shakes uncontrollably. He complains to his buddy of a sharp stabbing chest pain, numbness, tingling in his hands, and light-headedness. He has progressed rapidly over a few hours to the point where he cannot function as a driver.

Another soldier, a radio operator, becomes withdrawn, sad, anxious, and unable to sleep. He feels guilty because his buddy has been seriously injured. He



feels responsible. This soldier's guilt, sadness, and crying interfere with his ability to operate his radio.

These two cases help illustrate features commanders can use to identify pending psychiatric casualties. A commander should be alert for the following:

- Behavior that is unusual for the soldier in question—a normally “happy-go-lucky” type who becomes severely depressed, for example.
- A soldier who becomes less and less able to perform his duties, often despite an obvious willingness to do so.
- A steadily mounting sense of guilt or fear in a soldier.

In addition to these observations, there are clusters of symptoms that can help identify a combat psychiatric casualty. Although ultimately any behavior can be expressed by one of these soldiers, there are two relatively common presentations that can be remembered with the help of two acronyms—S-A-D and F-I-T-T-ful.

If a soldier is S-A-D then a Sleep disturbance with Anxiety and Depression will be apparent. On the other hand, if he is F-I-T-T-ful, he is Fearful, Irritable, Tense, and Tremulous. These symptoms, when added to duty impairment, complete the picture of a casualty.

Armed with these guidelines and groups of symptoms, what can be done at the unit level when a psychiatric casualty is identified? In other words, what can be done to reset the emotional circuit breakers?

Interventions are always made with the full expectation that recovery is possible with simple, but important, treatment. And much as unit members learn medical first aid, so must they also become proficient in emotional first aid. In fact, making sure all unit members are well versed in medical first aid is an important step toward emotional first aid. If a soldier is confident that he could save the life of a buddy—and that his buddy could save him—this confidence also contributes to his emotional well being. The unit medic should therefore be actively involved in teaching personnel both medical and emotional first aid.

## RECOGNITION

Emotional first aid includes the “three R’s”—recognition, reassurance, and relaxation.

Recognition involves being alert for any changes in behavior and duty performance that might suggest an impending problem. Recognition also involves identifying the specific concerns a soldier is struggling with. This could include guilt over the death of a close friend or just fear of being killed himself.

Reassurance involves using the powers of persuasion and suggestion that are attributed to the commander as an authority figure. The soldier needs to be assured that everyone gets scared in battle. Additionally, he needs to know that he is a

vital asset, that his behavior is to be expected in the situation, but that he is also expected to be a soldier—that even if he must leave the unit for treatment, he is expected to return to it, or to some other unit, and perform as a soldier again.

Reassurance also involves allowing a soldier to ventilate his fears, concerns, worries, losses, and guilt. A few minutes here may be enough to prevent an unnecessary evacuation.

The third “R” is relaxation. For an anxious soldier, a quick relaxation technique may allow other interventions to be more effective. A deep-breathing technique can be useful in which the soldier takes a slow, deep breath and holds it for a few seconds, then slowly, gently exhales. A few repetitions can be quite effective in reducing anxiety to a more manageable level. Relaxation can also be achieved from the comfort and understanding of a buddy in time of crisis.

In the final analysis, the identification, treatment, and prevention of psychiatric casualties in combat must be a shared responsibility of commanders and medical personnel alike. Through this cooperative effort they accomplish the most important mission—the preservation of manpower.

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# One-Rope Bridge

SERGEANT FIRST CLASS GORDON L. ROTTMAN

For years, the accepted method of rigging a one-rope bridge has been to tie a figure-eight or butterfly knot about one-third of the rope's length from the near-shore end, hook a snaplink to the knot,

pass the rope around a tree, run it through the snaplink, and then run it back toward the tree, where a few men take up the slack and tie the rope off.

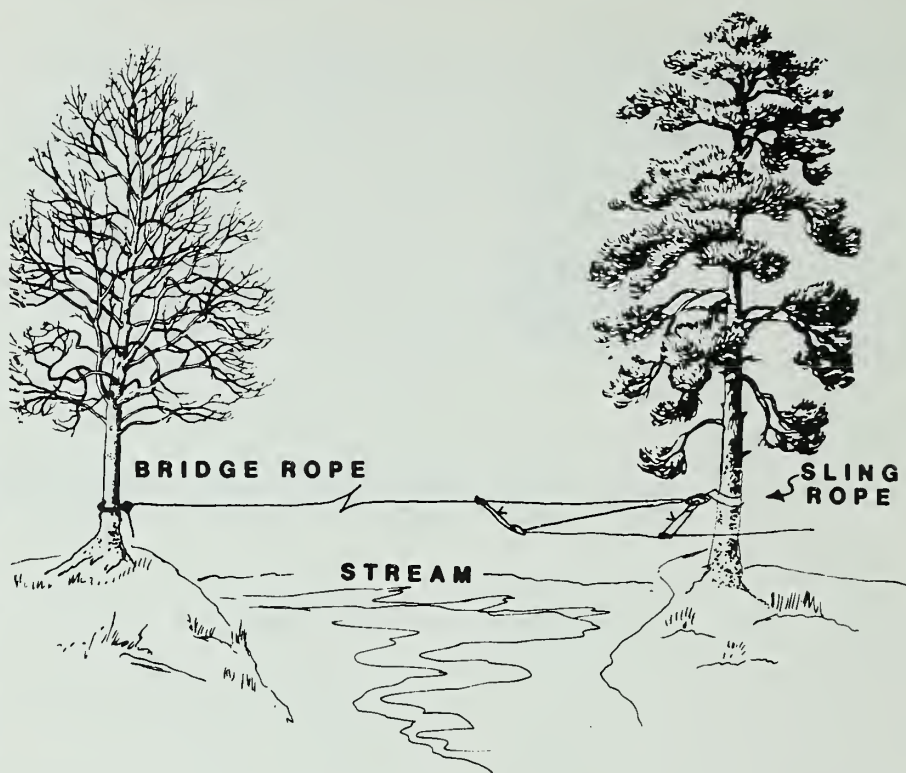
While this method is effective, it has

several inherent drawbacks. Foremost among them is that if the figure-eight or butterfly knot is not tied in the right position, the rope must be at least partially pulled back in, the knot untied, and then

re-tied in a new (and hopefully correct) position. Once the rope is weight loaded, the knot becomes difficult to untie. The type of knots used and this weight loading can also damage the rope. In addition, untying the secured rope from the tree before recovery can be somewhat time-consuming, as is the initial tie-off.

There is an alternative method that eliminates these problems, requires no special equipment, and is much faster to rig and recover. In effect, the knot and snaplink used in the accepted method constitutes a pulley; the alternative method uses three "pulleys," but it is still simple. The only equipment required is three snaplinks, a sling or "Swiss-seat" rope, and two approximately three-foot lengths of rope of a smaller diameter than the bridge rope. The ends of the three-foot ropes and the sling ropes are tied together with square knots, providing three separate looped ropes.

The bridge is constructed in the following manner: A man swims the rope across to the far side and ties it off. At the same time, the looped sling rope is passed around an anchor tree on the near side, and the looped ends are secured together with a snaplink. (This same method can also be used on the far-shore anchor tree to speed up the operation.) The near-shore anchor tree needs to be at least five meters (16 feet) from the water's edge. The bridge rope is passed through the snaplink and run back toward the water. Near the water's edge, one of the three-foot ropes is secured to the bridge rope with a prusik knot and a snaplink attached to the end of the loop. The square knot on the looped three-foot ropes needs to be positioned so as not to interfere with the tying of the prusik knot or the attachment of the snaplink. The running edge of the bridge rope is then passed through the second snaplink and run back toward the tree. In effect, the



bridge rope will now follow a "Z" pattern.

The second three-foot rope is secured to the running rope with a prusik knot, the third snaplink attached to it, and, once a couple of men have given a few good tugs to take up the slack, the third snaplink is snapped to the first snaplink on the sling rope. This effectively secures the rope as the two three-foot prusik ropes oppose each other, and the running end can now be dropped without being tied off. The two three-foot ropes can be slid on the bridge rope and their positions adjusted once they are secured.

A word of caution is in order here. The efficiency provided by the three "pulleys" can cause a rope to stretch too much and a well-used rope could even break when a load is placed on it. (It need not be as taut as a guitar string.) This added efficiency can also cause a poorly

rooted tree to pull out of a muddy stream bank. A manila rope is therefore the best suited for this type of bridge, because it does not stretch much.

In recovering the bridge, only the one snaplink on the sling rope needs to be unhooked and the entire rope system pulled across with the last man in tow.

This system can be rigged very rapidly. During an exercise, I once saw a five-man patrol (once the swimmer had crossed to the far shore) erect such a bridge, cross it, and recover the bridge and the last man in a total of one minute, 28 seconds.

Overall, this one-rope bridge is an improvement over the one constructed by the usual method.

**Sergeant First Class Gordon L. Rottman** is a full-time selection and training supervisor, Company G (Ranger), 143d Infantry, Texas Army National Guard. He served in Vietnam with the 5th Special Forces Group.

# MOVING?

## *Send change of address early.*



# ENLISTED CAREER NOTES



## INCENTIVE PROGRAM

Some soldiers overseas may be eligible to receive an extra 30 days of leave, an extra 15 days of leave with free travel to and from the United States, or an extra \$80 per month. These three benefits are available to soldiers who take part in the overseas extension incentive program.

Overseas extensions lower the demand for replacements from soldiers in the United States and increase the time between overseas tours.

The program has two MOS categories—space-imbalanced, which have more than 55 percent of their authorized spaces overseas, and non-space-imbalanced that have a turnaround time of less than 24 months. Presently, there are 33 space-imbalanced and 47 non-space-imbalanced MOSs in the program.

Soldiers in these MOSs who complete their normal overseas tours and extend for at least 12 months (up to a maximum of 18 months) are eligible for any one of the three options.

DA Circular 614-85-1 (Assignments, Details and Transfers—Incentives for Enlisted Members to Extend Tours of Duty Overseas) explains the program's policies. The Department of the Army changes the list of MOSs eligible for the program every six months and announces the changes by message.

## SRB CHANGE

Effective 1 October 1986, a soldier will be able to pocket more of his Selective Reenlistment Bonus (SRB) "up front."

In the past, a soldier who was eligible for a \$10,000 SRB would receive \$5,000 (less taxes) when he reenlisted and the remainder in anniversary payments. With the change, that same soldier would receive \$7,500 (less taxes) upon reenlistment and smaller anniversary payments.

The change can actually be worth much

more than \$2,500 to that soldier, because he might be able to use income tax averaging or use it to buy a house, for example.

## PROMOTION PROCESS

Many enlisted soldiers may find it hard to understand why they are not promoted as soon as they expect to be. A closer look at the promotion process and how it works may help.

All promotions, whether to private first class or sergeant first class, are dependent upon the needs of the Army. These needs are governed by the number of losses to the force—deaths, separations, and retirements.

Promotions for private through specialist four are made by field commanders. There are no constraints on these promotions provided the soldiers meet the time in service (TIS) and time in grade (TIG) criteria. They may receive accelerated advancements, within the limitations outlined in AR 600-200, provided allocations exist.

Promotions to sergeant and staff sergeant are semi-centralized—soldiers in these ranks compete equally against others in the same MOS based on a point system. Points are awarded for such areas as SQT scores, commander's evaluation, awards and decorations, weapons qualification, physical fitness test score, promotion board appearance, and military and civilian education.

Promotions to the ranks of sergeant first class through sergeant major are fully centralized, with sergeants first class promoted by the needs of their MOSs, and master sergeants and sergeants major by sequence number.

A record of a soldier's total points is forwarded through automated systems to the Department of the Army for consolidation into an Army-wide listing of scores by MOS. The cut-off score that would result in the promotion of the desired number of

soldiers for each MOS is then determined.

The number of promotions is often limited on the basis of MOS comparisons of assigned and authorized strengths and budgetary constraints. For example, high cut-off scores mean fewer promotions because of MOS overstrengths (more soldiers than positions) or tight budgets. Once determined, cut-off scores are mailed to all Army installations for the publication of orders.

Soldiers are eligible for promotion on the first day of the third month following their date of selection. For example: A soldier is boarded and recommended in January. Between 15 January and the end of the month, his points are forwarded to DA. In February his points and those of other soldiers boarded at the same time are consolidated with soldiers already on the list to determine how many are on it and the standing of each. At the beginning of March, DA establishes cut-off scores for promotions on 1 April. Soldiers boarded in January and earlier who meet the 1 April cut-off score are then promoted.

Soldiers who are qualified in overstrength MOSs face tough decisions. They can either continue to work in those areas that earn promotion points while waiting for their MOS to balance and cut-off scores to drop; or they can ask to be reclassified into shortage MOSs to improve their chances for promotion.

DA boards held annually select soldiers for promotion to sergeant first class, master sergeant, and sergeant major. Selections are made in each MOS on the basis of the number of projected vacancies. Promotions to sergeant first class are made each month by MOS on the basis of the needs of each MOS and of budgetary constraints. Promotions to master sergeant and sergeant major are based solely on assigned and authorized strengths of the respective ranks and, of course, on budget constraints.

**SQTs CONTINUE**

Various reports have been published announcing pending changes in the Army's individual training evaluation program. Nevertheless, while proposed changes are being discussed, soldiers will continue to take skill qualification tests as scheduled through Fiscal Year 1987.

**KEEP RECORDS CURRENT**

Many soldiers continue to underestimate the importance of their individual personnel qualification records, according to MILPERCEN's Enlisted Personnel Management Directorate.

These records, often referred to as DA Forms 2 and 2-1, are the keys to a soldier's career. They stand as a permanent and formal record of his individual qualifications, his past and present duty assignments, and a host of other data as required by AR 640-2-1.

When the information in these records is out of date or incorrect, it can cause assignment difficulties for the soldier or keep a Department of the Army board from selecting him for advanced schooling or promotion.

Continued discrepancies in DA Forms 2 and 2-1 give the impression that the soldiers are not taking their careers seriously. Sometimes outdated records accompany personnel requests to MILPERCEN. Or DA Form 2 does not contain the same information as Form 2-1, and the Enlisted Master File reflects other contradictions in the data that is essential to assignment managers. Members of selection boards may notice, for example, that while a soldier's DA Form 2 shows that he is 66 inches tall, his Form 2-1 shows his height as 68 inches.

Too many soldiers seem to be depending upon the system to take care of them. That may not happen. Although record custodians have a responsibility to maintain personnel qualification records, total accuracy is not possible without the involvement of each soldier. Too many items are required on these documents to leave their accuracy to the records clerk at the personnel office.

Only the soldier can solve these problems. Although an annual audit of DA

Forms 2 and 2-1 is no longer required, it is important that all soldiers take control of their own futures by carefully reviewing their records at least once a year.

**EMF/CMIF**

Many enlisted soldiers seem to think that after they have verified the accuracy of their Official Personnel Files at Fort Benjamin Harrison, there is nothing they can do about their records. But there is.

Two other files also play a vital role in a soldier's career—the Enlisted Master File and the Career Management Information File, both maintained at MILPERCEN.

The Enlisted Master File (EMF) is computerized. It contains more than 250 data elements, such as name, social security number, rank, MOS, date of rank, date of last permanent change of station, date returned from overseas, marital status, number of family members, assignment preferences, and date entered active duty.

Computer transactions from battalion personnel and administration centers or installation MILPOs update the EMF. This file is used by the centralized assignment procedures computer system at MILPERCEN in making nominations for worldwide assignments and future training.

Obviously, then, if the data in a soldier's EMF is wrong, he can suffer. For example, he could be sent overseas sooner than required for his MOS if his date returned from overseas code is blank or incorrect.

The EMF is also the primary source of information for determining assignments and schooling for soldiers from private through sergeant. (MILPERCEN does not maintain DA Forms 2 and 2-1 or Career Management Information Files (CMIFs) for soldiers in these ranks.)

CMIFs are maintained by the career branches at MILPERCEN on all non-commissioned officers from staff sergeant through sergeant major. When a soldier is promoted to staff sergeant, the local MILPO forwards copies of DA Forms 2 and 2-1 to his career branch, where they are used to create a CMIF. The Enlisted Records and Evaluation Center (EREC) provides a microfiche copy of the soldier's

OMPF for inclusion in his CMIF.

The CMIF contains items such as copies of evaluation and academic reports, EREC Form 10A (Enlisted Evaluation Data Report), DA Form 2635 (Enlisted Preference Statement), photograph, reclassification orders, retirement application, assignment transaction sheets, volunteer applications, career manager's notes, and correspondence with the NCO.

A soldier's CMIF is updated only when he provides new information or after a promotion board, when EREC sends his microfiche OMPF and DA Forms 2 and 2-1 for inclusion in the file.

Before the career branch takes any action on an NCO in the rank of sergeant through sergeant major, it reviews his CMIF. This ensures that the soldier is qualified for the assignment or training and that it supports his professional development.

An NCO's annual audit of his DA Forms 2 and 2-1 is the best way for him to make sure the files used to manage and develop his career are accurate and complete. When changes are made to these documents, after 30 days he should verify that the changes are in his Enlisted Master File.

The most important information for evaluating professional development is schools completed and assignment history, and this information is available only from DA Form 2-1.

Enlisted Master Files and Career Management Information Files must therefore be as accurate and complete as possible if a soldier is to assist in managing his own career.

**RACIAL/ETHNIC CODE**

All soldiers are responsible for making sure their racial and ethnic category (REDCAT) data base information accurately reflects the group to which they belong or with which they most closely identify.

Current Department of the Army policy requires that each soldier identify himself as a member of one of the six Department of Defense standard race or population groups—American Indian, Asian, Black, White, Other, and Unknown, as well as choose one of the 21 standard



ethnic groups (which include "Other" and "Unknown").

The accuracy of this data is important to the Army's assessment of its true racial/ethnic composition. It helps ensure that procedures and regulations do not adversely affect members of any particular group. Without accurate information in the data base, such effects cannot be measured.

Soldiers establish and maintain accurate racial/ethnic category data through their servicing MILPOs, and an appropriate time to do this is during the periodic review of their records.

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## NCO CORPS CHANGES

The Army is carrying out some of the recommendations made by the Noncommissioned Officer Professional Development Study, which was completed earlier this year, and of the Training and Doctrine Command's Enlisted Personnel Management System Review.

One change will be to limit soldiers' assignments in non-primary specialties

and undocumented positions to 12 months or less. This will benefit soldiers and the Army, because it will keep soldiers in assignments that will promote their progression in the careers for which they have been trained. For example, an 11B infantry sergeant could not work for more than 12 months as a 71L administration NCO.

Another change includes limiting back-to-back assignments outside a soldier's normal career pattern. Under this change, an enlisted soldier would no longer be allowed to go, for example, from a recruiting job straight into a drill sergeant assignment or an ROTC job. This will help keep soldiers in the mainstream while supporting the professional development of individual soldiers. Soldiers assigned to special duty jobs such as recreation service will continue to be limited to 90 days in those jobs.

During the next year, MILPERCEN officials will test changes in the centralized assignment process for enlisted soldiers. They will be making recommendations in writing to help the gaining command make final assignments for in-bound soldiers. These recommendations would take into

consideration the soldier's training and experience.

Another change calls for the elimination of mandatory secondary MOSs for NCOs in the rank of promotable sergeant and above. Too many soldiers have secondary MOSs in their files for which they have not been trained. This change will affect soldiers in all but the space-imbalanced MOSs.

Secondary MOSs will be awarded only after appropriate training, and if a soldier has had formal training or experience in a certain field, then he would retain that secondary MOS.

The NCO Professional Development Study identified eight requirements that define the responsibilities and duties of NCOs. These include job proficiency, MOS competency, physical fitness and military bearing, basic education skills, leadership skills, training skills, commitment to professional values, and attributes and personal responsibility.

A new EER is now being developed that will include these eight requirements. It should be fielded by the fall of 1987.



# OFFICERS CAREER NOTES



## CORRECTION ON PIN-ON POINTS

The item concerning "pin-on" points for promotion that appears in INFANTRY's July-August 1986 issue (page 47) contains an error. The correct current targets are as follows:

- Colonels—22 years, plus or minus 1 year.
- Lieutenant colonels—16 years, plus or minus 1 year.
- Majors—10 years, plus or minus 1 year.

As the earlier item explains, these are not requirements, only guidelines.

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## SELECTION BOARD COMMENTS

Feedback from 1986 officer selection boards at MILPERCEN has brought out several areas of concern:

**OERs.** Too many acronyms are still being used, especially in duty titles. Board members are from various branches, so the duty description must be written in terms that are common to all branches.

The comments in Part IV (Professionalism) should be able to stand alone without reference to the traits listed above. For example, instead of "A.1.—Always, A.6.—Consistently," comments should be straightforward: "Judgment is superb."

**Weight.** Weight control is a continuing issue with selection boards. Officers who are consistently pushing the maximum screening table weight or who have been given a new, medically determined maximum allowable weight are bound to receive close scrutiny. This is especially true when there has been a history of increasing weight.

A photo can tell the board members a lot about how well an officer meets military appearance standards, even if the officer does not meet the screening table or maximum allowable weight standards (AR 600-9). In these instances, raters are

also encouraged to help clarify an officer's appearance and fitness by making specific comments, positive or negative.

**Photographs.** Although the problems with photos have been discussed time and time again, promotion boards continue to complain about the absence of current photos or the poor quality of the photos they do see. Additional general comments are made about such problems as ribbons not being worn, shoes not shined, poor pressing of uniform, and improper length of trousers.

**Officer Record Briefs.** Although a yearly audit of an officer's ORB is required, in numerous instances it appeared that these audits had not been conducted. Officers should pay particular attention to assignment history, awards, both military and civilian education, and date of last photo and physical.

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## KEEP ORB CURRENT

Each year during an officer's birth month, his local Military Personnel Office (MILPO) contacts him and reminds him to review his ORB and make any necessary changes. For the data elements that can be corrected by the MILPO, changes are entered by automated transactions and conveyed to MILPERCEN for posting to the Officer Master File (OMF). For the data elements that cannot be corrected locally, the MILPO sends supporting documentation to the appropriate career branch office.

The problem is that many officers never go to the MILPO to validate their ORBs. And of those who do, many do not follow up to make sure the changes were posted.

New ORBs are sent to MILPOs four months after an officer's birth month and again four months later. In addition, an officer may request an updated ORB by mail from MILPERCEN (ATTN: ASNISMCM). Requests must include name, grade, social security number, and date

of birth. Special requests should not be submitted less than 60 days after an annual ORB audit to allow time for the results to be posted to the OMF.

The importance of accuracy in such categories as pay entry basic date (PEBD), advanced civilian education, and height/weight is obvious. But an officer who lets his ORB go unaudited for extended periods may suddenly find a host of less visible problems. Faulty or inconsistent abbreviations in the assignment history section, for example, take on new importance when an officer knows that a promotion board will shortly be reviewing the ORB in detail.

Another problem worth mentioning—again—is the proper way to fill out and submit the Officer Preference Statement, DA Form 483. The instructions in the upper right corner of the form clearly say that a No. 2 pencil is to be used and that the form is to be mailed unfolded in a 9x12 envelope. But many are still received filled out in ink, crayon, or magic marker and folded or stapled.

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## SINGLE TRACK OPTION

In accordance with the recommendation of the Officer Personnel Management System (OPMS) Study Group, officers are being developed in different career patterns to meet Army requirements through single and dual tracking.

In order to meet the large number of Army requirements at the field grades, especially in the functional areas, only a small number of combat arms officers will be allowed to single track in their branch.

The combat arms officers who do request to single track in their branch must also be aware of potential assignment limitations. Specifically, they will be eligible to fill only the positions coded for their branch, branch immaterial, or combat arms immaterial. They will not be considered for any other positions coded for



a functional area, such as division and brigade personnel positions (coded 41) and operations positions (coded 54).

Limits to the single track inventories will be established by year group for each branch and functional area in which single tracking is permitted.

The personnel proponents for some functional areas have determined that branch experience, through dual tracking, is vital to professional development. Therefore, single tracking is not permitted in SCs 18 (Special Operations), 48 (Foreign Area Officer), 50 (Force Development), and 54 (Operations, Plans, and Training).

Because of current and projected shortages, a very limited number of officers in the following basic branches will be allowed to single track in any functional area: 21 (Engineer), 25 (Signal), 35 (Military Intelligence), 74 (Chemical), 91 (Ordnance), and 92 (Quartermaster).

To qualify for single tracking, an officer must meet the single track criteria established by the personnel proponents as shown in DA Pamphlet 600-3, subject to the above restrictions.

Several methods will be used to implement the single track career pattern:

- Officers who hold two specialty codes in the same branch—for example, an officer who holds SC 22 and SC 23—will be automatically single tracked in the Engineer branch. This also applies to the Military Intelligence, Signal, Ordnance, and Quartermaster branches. The conversion will be automatic with no application required. If an officer in this category wishes to add a functional area, however, and dual track, he should forward his request, by letter, to his career management officer.

- Some of the officers who currently hold two branch codes or two functional area codes have been recommended for the single track career pattern on the basis of Army requirements and individual qualifications. These officers have been advised of the board's recommendation and given an opportunity to appeal before a final decision.

- At seven years of service, officers who are eligible to single track in their branch will be given an opportunity to express their desires before the functional area designation process.

Any officer who wants to single track in either his branch or his functional area and does not fall under one of the above three categories (and who is not subject to the restrictions discussed earlier) may submit his application by letter to USA MILPERCEN, ATTN: DAPC-OPB, 200 Stovall Street, Alexandria, VA 22332-0400, by 30 November 1986. Boards will convene in December 1986 and January 1987 to select those who are to single track. Board results will be available in April 1987.

The procedures outlined here do not apply to promotable lieutenant colonels or to serving colonels. Requests from officers in these ranks will be considered on a case-by-case basis by individual application to Colonels Division, MILPERCEN, ATTN: DAPC-OPC, 200 Stovall Street, Alexandria, VA 22332-0400.

## RESERVE COMPONENT PROMOTIONS

The selection rate for educationally qualified officers considered by Reserve Component promotion boards is high, but too many of the officers not selected are passed over primarily because of incomplete files.

The most common deficiencies in the files being reviewed are missing education documents and missing Officer Evaluation Reports. A significant number of files are also missing photos, or they contain photos of poor quality. Another problem is insufficient data to establish that an officer meets the height and weight standards as outlined in AR 600-9.

If you are a Reserve Component officer whose records are due to go before a promotion board, here is what you need to do:

- Get a copy of your microfiche Official Military Personnel File about one year before the board is to convene. For promotion to captain or major, that means January or February. For promotion to lieutenant colonel or colonel, the boards meet in September and October.

- Take the OMPF to the Reserve Center or any library to use a microfiche reader. Check the "P" (Performance) fiche, which contains such things as OERs, academic evaluation reports (AERs), awards, and disciplinary data.

This is the primary document used by selection boards.

- The fiche should contain proof that you have completed the education requirement for promotion to the next higher rank. If it does not, forward a copy of the AER (DA Form 1059) through channels to get that proof on the fiche and before the board.

- While you are looking at the fiche, inventory your OERs. All of them should be there, except possibly the latest one. If they are not, your record will be less competitive than those of other officers before the board. If an OER is missing, ask your personnel officer to initiate a tracer. (A recent records screen showed that more than 25 percent of the records were missing OERs. And a single OER sometimes makes the difference between selection and non-selection.)

- Have an official photo made if you can; if not, a snapshot will do. First, make sure your uniform fits right, get it pressed, get a haircut, shine your shoes. Then have the photo taken against a plain wall. Get the photo enlarged so you can provide a 4x10 copy to the board. Have several copies made. On the back of each, carefully print your name, rank, social security number, branch, date of the photo, and your current height and weight. Sign the photo.

- Make sure your weight is within the standards every time you are weighed. If you have a higher maximum allowable weight (MAW) than the tables permit, send a copy of the MAW document with your packet to the board. If there is any question about your weight, mention your current weight in a letter to the board.

- Write a letter to the board president. In it detail documents that are missing from your fiche, such as OERs or education records. If your weight is near the maximum allowable for your height, state your current weight. If you have a maximum allowable weight from the "pinch test" that exceeds what is allowed in the tables, attach a copy of the MAW statement as an enclosure.

If your fiche does not contain proof of the education required for promotion, tell the board you have completed the requirement, and attach a copy of the proof—DA 1059 or your diploma. If you are working on military education beyond that required, mention this as well.



# BOOK REVIEWS



Daring Books (2020 Ninth Street, S.W., Canton, Ohio 44706) sent us recently a number of its publications we think you will find interesting and useful:

- **CADENCES: THE JODY CALL BOOK NUMBER 1**, edited by Sandee Shaffer Johnson (1986. 160 Pages. \$3.95, Softbound). This is an upgraded version of Johnson's 1983 publication. Although its appearance is different, its contents are the same.

- **CADENCES: THE JODY CALL BOOK NUMBER 2**, edited by Sandee Shaffer Johnson (1986. 160 Pages. \$3.95, Softbound). This second book of Jody calls includes a number of calls from Navy and Marine sources. As in Book 1, the calls are grouped by chapters, the titles of which give a clue to the type of calls found in each—"big, bold and brave," "short timers fever," and "'Nam to now." There may be a few duplications, but not enough to worry about. (Johnson has plans for another cadence book, one that will probably include chants from other countries.)

- **THE CONDUCT OF ANTI-TERRORIST OPERATIONS IN MALAYA**. A Daring Battle Book (1985. 290 Pages. \$8.95, Softbound). This is a straight reprint of a 1961 British field manual; its title is self-explanatory. It is also the third edition of a manual that was first published in 1952 and updated six years later. The manual contains the lessons learned by the British forces during their nine years of fighting in the jungles of Malaya (now Malaysia), lessons that are as valuable today as they were 25 years ago.

- **DOUBLE WINNERS OF THE MEDAL OF HONOR**, by Raymond J. Tassin (1986. 224 Pages. \$15.95). Only 19 U.S. fighting men — five soldiers, seven sailors, and seven Marines — have each won two Medals of Honor. In this informative and readable book, the author, chairman of the journalism department of Central State University in Oklahoma, recreates the events surrounding each of the double awards and tells

us something about the men who earned them. Only three U.S. Army enlisted soldiers have ever received two Medals of Honor; all six of those medals were earned during the Indian Wars of the 1870s. Thomas Ward "Tom" Custer, who died with his brother George at the Little Big Horn in 1876, was the first double winner of the medal.

The author notes that only 3 of the 19 men were killed in action, only one while earning the medal; 14 were career servicemen; only 10 were born in the United States; and the highest ranking double winner was a major at the time he earned his second award.

- **AMERICAN PRESIDENTS: FASCINATING FACTS, STORIES, AND QUESTIONS OF OUR CHIEF EXECUTIVES**, by Richard L. McElroy, with illustrations by Walt Neal (1984. 168 Pages. Softbound). Filled with questions (and answers), anecdotes, and the author's personal ranking of our presidents in several categories, this book is particularly appealing during this period of our history when we are preparing to celebrate the bicentennial of our Constitution.

We have also received a number of interesting historical reference books from the Sterling Publishing Company (2 Park Avenue, New York, NY 10016):

- **VIETNAM WEAPONS HANDBOOK**, by David Rosser-Owen (1986. 136 Pages. \$6.95, Softbound).

- **U.S. ARMY UNIFORMS: EUROPE, 1944-1945**, by Cameron P. Laughlin and John P. Langellier (1986. 68 Pages. \$5.95, Softbound).

- **THE PARAS: THE BRITISH PARACHUTE REGIMENT**, by James G. Shortt (1985. 72 Pages. \$5.95, Softbound).

- **ALLIED TANKS ITALY: WORLD WAR TWO**, by Bryan Perrett (1986. 64 Pages. \$5.95, Softbound).

- **U.S. TANK DESTROYERS OF WORLD WAR II**, by Stephen J. Zaloga (1986. 64 Pages. \$5.95, Softbound).

- **UNITED STATES TANKS OF WORLD WAR II**, by George Forty. A reprint of the 1983 book of the same title (1986. 160 Pages. \$9.95, Softbound).

- **ISRAELI DEFENSE FORCES, 1948 TO THE PRESENT**, by Lee Russell and Sam Katz (1986. 68 Pages. \$5.95, Softbound).

Here are a number of our longer reviews:

**THE SECOND INDOCHINA WAR: A SHORT POLITICAL AND MILITARY HISTORY, 1954-1975**. By William S. Turley (Westview Press, 1986. 238 Pages. \$24.95). Reviewed by Doctor Joe P. Dunn, Converse College.

From a dearth just a few years ago, today several good textbooks are available on the Vietnam War. Some of the best include those by George Herring, Stanley Karnow, Thomas Boettcher, James Pinckney Harrison, and Paul Kattenberg. The problem with many, however, is the same as that for courses on Vietnam — the division between the Asian specialists and the Americanists. Most Vietnam courses and most texts, therefore, tend to lean heavily to one side or the other: Vietnamese perspectives or American concerns with the war.

Finally, we have an excellent text that has the proper balance. Professor Turley is one of the nation's leading experts on Vietnamese politics and the communist movement. From his personal experience in Vietnam — exchange professor at Saigon University in 1972-1973, Fulbright scholar in Thailand between 1982 and 1984, and two visits to North Vietnam since 1975 — and his extensive use of Vietnamese sources, Turley sets the American experience within the context of Vietnamese politics. He focuses on the experiences, strategies, leadership, and internal politics of both South Vietnam and the communist forces and interprets the dynamics of American actions.

His book is a model of judicious, insightful scholarship that is quite suitable for the general reader as well. Turley has



managed to take a very large topic and present it in a concise but very complete manner. The concluding chapter, "Of Lessons and Their Price," and the bibliographic essay are particularly valuable elements. I recommend this marvelous book most enthusiastically.

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**THE STRAW GIANT, TRIUMPH AND FAILURE: AMERICA'S ARMED FORCES.** By Arthur T. Hadley (Random House, 1986. 315 Pages. \$19.95).

Wham! Bam! Pow! Hit 'em again!

And Arthur T. Hadley, World War II tanker and a journalist since, does just that as he pounds away at the U.S. military establishment. He thinks little of the way that establishment is organized and operated; thinks even less of the men and women who run it now and ran it before; and traces many of today's ills to the 1920s and 1930s when the military services were forced to survive on the few goodies thrown their way by presidents and congresses.

He devotes the bulk of his book, however, to post-World War II days and the unification of the services, something he feels has been an abject failure. He fills his pages with horror stories about inter-service and intraservice rivalries, less than competent and far too numerous civilian appointees who remain but a short time and move on, egotistical and undisciplined generals and admirals, micromanagement at the presidential level, and research and development efforts gone awry. Marines in particular will not like this book, because Hadley is not kind to them.

An old saying among those who have served any time at all in the Pentagon goes something like this: "The U.S. Government looks better the farther from Washington you get." And while Hadley says some things that need to be said, his nearness to Washington, its politics, and its minions for too many years is all too apparent.

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**SOLDIERS: A HISTORY OF MEN IN BATTLE.** By John Keegan and Richard Holmes (Viking, 1986. 288 Pages. \$22.95). Reviewed by Colonel Rolfe A. Hillman, United States Army Retired.

Please do not judge this book by its cover, which features a sturdy Infantry captain looking properly apprehensive as he leads a file of soldiers across a rice paddy. In fact, while one of its 13 chapters is indeed titled "Infantry," the book covers many other military subjects in a time span from before the sword of Gideon up to the recent Falklands War. The subject categories include people, concepts, and things — tanks, artillery, experience of battle, sinews of war, fighting spirit.



The book was assembled as a companion volume to a British Broadcasting Company television series of the same name, which, as far as we can determine, will not be shown in the United States. Accordingly, the text is supported by photographic and art illustrations of a quantity and quality that qualify the book as both informative and decorative for a small coffee table. The illustrations also follow what appears to be a recent vogue: they confront the reader with high body counts and the full graphics of battlefield finality.

A browser will find the book uncluttered by documentation, although those pursuing special byways of military history will wish the clutter had been there. In either case, the book is not burdened by a reviewer's personal conviction that it must forthwith be declared required reading.

**SHERMAN'S MARCH AND VIETNAM.** By James Reston, Jr. (Macmillan, 1984. 323 Pages. \$14.95). Reviewed by Doctor Mike Fisher, University of Kansas.

Reflections on the Vietnam war experience continue to generate a growing body of historical, fictional, analytical, and critical body of literature. This is a contribution to the latter category.

The author draws on our Civil War antecedents to condemn what he sees as the ethical misconduct of the civilian and military leaders of the United States during the Vietnam war. He finds this same leadership responsible for the post-Vietnam disillusionment, divisiveness, and bitterness that he sees as the war's principal legacy.

As a vehicle for his narrative, Reston traces General William T. Sherman's march through present-day Georgia and the Carolinas from Tunnel Hill, Georgia, to Bennett Place, North Carolina. But several problems flaw this book. First, the diverse complexities and differences of the Civil and Vietnam wars make any kind of analogy impossible to draw. Second, the author presents as truth the wanton destruction of the Vietnamese land and people by U.S. troops. Here he mistakenly attributes post-traumatic stress disorder to the commission of atrocities rather than to involvement in sustained, intensive combat. Finally, and perhaps most importantly, Reston views U.S. involvement in Vietnam through a dark glass, presenting an unbalanced picture of what actually took place there. It is too bad that the author did not use the same care in examining the Vietnam war as he did in analyzing Sherman's Civil War battlefields.

Reston's criticism may anger veterans and confuse younger soldiers. But the central question of military ethics, though misaddressed by the author, should not be ignored. Too often, time tends to obscure the harsh realities and inevitable horrors of war, masking them with a fragile mixture of glory and romanticism.

Professional infantrymen understand the need to listen carefully to the echoes of the past as they prepare daily for the ultimate test that combat provides. In that arena, the moral and ethical stan-



dard of the individual will be sorely tested.

**PERSHING: GENERAL OF THE ARMIES.** By Donald Smythe (Indiana University Press, 1986. 399 Pages. \$27.50). Reviewed by Captain Harold E. Rough, Jr., United States Army.

The story of the American Expeditionary Force (AEF) in World War I and its commander, General John J. Pershing, are forever entwined in the history of the United States' noble effort to "make the world safe for democracy."

Donald Smythe has been studying and researching Pershing's life for almost three decades, and his current work is the sequel to his 1973 book, *Guerrilla Warrior: The Early Life of John J. Pershing*, and completes his biography of this almost legendary soldier.

The book begins with Pershing's selection to command the AEF shortly after the U.S. entered the war in April 1917. Pershing grew in maturity and competence as the war progressed, as did the AEF, the evolution of which Smythe tells about in rich detail. Smythe makes magnificent use of unpublished manuscripts, interviews, correspondence, and oral reminiscences in addition to published sources to tell his story.

Although he is an obvious admirer of his subject, Smythe's work has been done with great objectivity, including details concerning Pershing's personal life. He does not try to cover up allegations of Pershing's fathering illegitimate children in the Philippines, his two cases of gonorrhea contracted when he was a younger man, or his surreptitious relationship with Micheline Resco, which started in 1917 and to whom Pershing was secretly wed in 1946.

One of the major contributions of the book is the clarification of the issues that seriously divided the Americans from the British and French concerning the use of the American forces in France.

Overall, the book is a model of clarity, scholarship, incisiveness, and readability. It has a 41-page section of notes and a 33-page bibliography, plus photographs of the major personalities of the day and outstanding, easy-to-read maps. It is an indispensable and authoritative

reference for anyone interested in Pershing and in the AEF and the role the U.S. played in the "war to end all wars."

**THE 1987 MILITARY HISTORY CALENDAR.** By Raymond Lyman (Paladin Press, 1986. \$8.95).

Perhaps this particular item should not be in a book review section, but we think it merits a place here because this is not only a calendar, it is also a military history lesson, what with its historical photographs and almost daily entries. History buffs would welcome this as a gift.

**THE SOVIET AIRBORNE EXPERIENCE.** By Lieutenant Colonel David M. Glantz. Research Survey Number 4 (Combat Studies Institute, Fort Leavenworth, Kansas, 1984. 211 Pages. Soft-bound). Reviewed by Major Don Rightmyer, United States Air Force.

Airborne operations form an important part of the Soviet military doctrine of deep battle. Although this surprises many, it is not a recent development in Soviet military theory. Despite the highly publicized uses of airborne forces by the United States, Great Britain, and Germany during World War II, the Soviets also used their airborne forces actively during the war years.

The author of this research survey is a Soviet area specialist who has written his monograph to clarify this little known facet of Soviet military operations. After discussing the Soviet airborne efforts during the 1920s and 1930s, the author uses most of his pages to cover the various actions by Soviet airborne forces during the war years. He provides a thorough discussion of each major engagement that involved the use of airborne troops along with excellent diagrams that detail both Soviet and German movements. The remainder of the book covers airborne developments since the end of World War II.

Colonel Glantz's study is a concise

**NOTE TO READERS: All of the books mentioned in this review section may be purchased directly from the publisher or from your nearest book dealer. We do not sell books. We will furnish a publisher's address on request.**

look at a critical aspect of present-day Soviet military operations and the foundation on which it was built. It provides a basis for further study and research. The bibliography and footnotes are extensive — they include both Soviet and Western sources — and an appendix containing ten colored maps is quite useful.

**JANE'S INFANTRY WEAPONS, 1986-87. 12th Edition.** Edited by Ian V. Hogg (Jane's Publishing, 1986. 991 Pages. \$136.00).

This latest edition of the standard and indispensable reference work on Infantry weapons and related ammunition and equipment has two new features — a multi-lingual (English, French, German, Italian) glossary of technical terms that are used in describing firearms, and an index of manufacturers along with their full addresses and telephone and telex numbers. It also has the usual addenda section (seven plus pages this time) that includes information on various weapons and pieces of equipment that arrived after the main part of the book had been set.

Otherwise, the book contains the usual detailed information on point target and area weapons and ammunition, antiarmor and antiaircraft weapons, electronics and optics, training aids and simulators, body armor, and national inventories.

In his foreword, the editor, Ian Hogg, discusses a few of the latest developments in infantry weapons and ammunition, including the "pencil tracer" bullet developed by a U.S. firm. Hogg believes this bullet is "more accurate, more consistent in its burning, brighter and easier to spot than any conventional tracer."

**GUIDE TO EFFECTIVE MILITARY WRITING.** By William A. McIntosh (Stackpole Books, 1986. 223 Pages. \$14.95, Paperback). Reviewed by Ms. Marie Edgerton, Deputy Editor, INFANTRY Magazine.

The author is an Army lieutenant colonel and a permanent professor of English at the United States Military Academy. He is in a position, therefore, to be well acquainted with military writing at its best and at its worst.

He discusses the Army's 1985 regula-



tion called *The Army Writing Program*, a program that was developed at West Point. He calls it "not particularly unusual" except for two things — its own economy of language and its announced "standard by which a piece of writing will be judged." He says, "The essence of the regulation is this: Effective writing can be understood in a single rapid reading, and it is generally free of grammatical errors."

McIntosh's basic motto for the military writer is "I will write only when I must." In other words, the writer should see whether there may be an alternative method of communication that he can use short of writing.

McIntosh also calls for a less formal style in military writing, which in the past has generally forbidden such things as contractions and personal pronouns. And it has used the passive voice excessively. *Please* and *thank you* were strictly forbidden.

The author not only advocates using active voice (as most other teachers of writing do) but also urges military writers to use those previously forbidden constructions. This will be a real breakthrough if it catches on.

The grammar and usage section of the book is pretty much like others of the civilian variety, but may be useful nevertheless. One always feels, however, that books of this kind are essentially

"preaching to the converted" — that the only people who read them are those who are already fairly competent writers concerned about the finer points of their craft.

One annoying thing about the book is the author's use of feminine pronouns instead of the masculine *he*, *his*, *him* normally used in the generic sense. In bending over backward to avoid sounding sexist, he is oddly guilty of a kind of reverse sexism. In a military context this comes across as highly artificial, especially when no woman has been mentioned.

All in all, the book, with the *New Army Writing Program*, calls for clear, simple, straightforward communication, just as the civilian world has for many years. And it's about time.

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**JANE'S MAIN BATTLE TANKS. Second Edition. By Christopher F. Foss (Jane's Publishing, 1986. 208 Pages. \$22.00).**

This new edition (the first edition was published in 1983) contains updated development histories, complete lists of variants, and full specifications of all of the main battle tanks in service in the world. The author, Christopher Foss, also includes details of some of the new designs that may enter service in the 1990s. As is usual with all of the Jane's series of reference books, this one, too,

has hundreds of selected photographs and line drawings.

Unfortunately, without a table of contents and running heads it is difficult for a reader to wend his way through the book without resorting to frequent glances at the index.

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**WAR IN THE MIDDLE AGES. By Philippe Contamine. Translated by Michael Jones (Basil Blackwell, 1984. 387 Pages. \$29.95). Reviewed by Lieutenant Colonel John C. Spence III, United States Army Reserve.**

The author, a professor of history at the University of Paris, has written an interesting and well documented history of military activity in the Middle Ages. It is a welcome addition to a previously neglected period of military history. For some scholars of military history, writers such as B.H. Liddell Hart, the military significance of the Middle Ages is dismissed in just a few short lines. Contamine's study places the military activity of that era in historical perspective.

Contamine shows that from the decline of the Roman Empire to the rise of the modern nation state (c. 1500 A.D.), the Middle Ages were not merely the "Dark Ages." To the contrary, it was a period of significant military development in terms of organization, tactics, armaments, and social attitudes toward warfare.



Since the author is French, it is only natural that his yardstick for measuring the cultural development of warfare is France. He points out that the Middle Ages represented a period of transition in which armies began to develop as coherent organizations with the rudiments of bureaucracy and specialized divisions of labor.

One of the enduring legacies of the Middle Ages was the development of the doctrine of a "just war." While such a doctrine was later subverted to justify dynastic wars, the contemporary student of military history will recognize similarities in the current policy followed by the United States.

Warfare during most of the Middle Ages was unique. The real problem for medieval powers in waging war was not in assembling forces but in maintaining such forces in the field for any length of time.

The book is well researched, contains an extensive bibliography, and has an impressive collection of prints and drawings.

**JANE'S MILITARY COMMUNICATIONS.** Seventh Edition. By R.J. Raggett (Jane's Publishing, 1986. 878 Pages. \$140.00).

Like its predecessors this volume covers the wide range of military communi-

cations equipment that can be found in service with military, naval, and air forces throughout the world.

It is divided into four major parts, the first of which is the largest by far covering as it does the many items of equipment such as ground-based and air-based radios, tactical ground radios, airborne radios, and line communications. The other parts are devoted to the major systems, appendixes, and indexes. There are also addenda that update the main part of the book.

The author's foreward is particularly interesting, discussing as it does the Soviet's inferior electronic technology. But he also points out that the Soviets do not take the same approach to military communications as the Western countries and that they do not rely on the ready availability of radio communications. All in all he makes a number of interesting points that our Infantry leaders should seriously consider in their own planning for active operations.

#### RECENT AND RECOMMENDED

**PUBLIC REPORT OF THE VICE PRESIDENT'S TASK FORCE ON COUNTERING TERRORISM.** Office of the Vice President of the United States, 1986. 44 Pages. \$3.25, Softbound. USGPO S/N 040-000-00494-7.  
**COMMAND STRUCTURE FOR THEATER WARFARE: THE QUEST FOR UNITY OF COMMAND.** By Thomas A. Cardwell III. Air University, 1986. Reprint of 1984 Edition. 208

Pages. \$4.50, Softbound. USGPO S/N 008-070-00520-4.

**LESSONS OF GRENADA.** U.S. Department of State, 1986. 28 Pages. \$1.25, Softbound. USGPO S/N 044-000-02109-9.

**MODERN AMERICAN ARMOR: COMBAT VEHICLES OF THE UNITED STATES ARMY TODAY.** By Steven J. Zaloga and James W. Loop. Sterling, 1986. 88 Pages. \$12.95.

**THE AIRBORNE SOLDIER.** By John Weeks. Sterling, 1985 Reprint of the 1982 Edition. 192 Pages. \$7.95, Softbound.

**LINCOLN FINDS A GENERAL: A MILITARY STUDY OF THE CIVIL WAR, VOLUME ONE.** By Kenneth P. Williams. A Reprint of the 1949 Edition. Indiana University Press, 1985. 443 Pages. \$10.95, Softbound.

**BOLDNESS BE MY FRIEND.** By Richard Pape. St. Martin's Press, 1985. 422 Pages. \$11.95.

**OVER THE HUMP.** By Lieutenant General William H. Tunner. USAF Warrior Series. New Imprint of the 1964 Edition. 368 Pages. \$8.00, Softbound. USGPO S/N 008-070-00557-3.

**THE KNIGHTS OF CHRIST.** Text by David Nicolle, Color Plates by Angus McBride. Osprey, 1984. Men-at-Arms Series 154. 40 Pages. \$7.95, Softbound.

**OBA: THE LAST SAMURAI, SAIPAN, 1944-1945.** By Don Jones. Presidio Press, 1986. 241 Pages. \$16.95.

**ILLUSTRATED CATALOG OF CIVIL WAR MILITARY GOODS.** By Schuyler, Hartley and Graham. A Dover republication, slightly altered, of the 1864 Edition. Dover Publications, 1985. 146 Pages. \$9.95, Softbound.

**THE RED DEVILS FROM BRUNEAU TO THE FALKLANDS.** New Edition. By G.G. Norton. Hippocrene Books, 1986. 310 Pages. \$17.95.

**THE PURGE: THE PURIFICATION OF FRENCH COLLABORATORS AFTER WORLD WAR II.** By Herbert R. Lottman. William Morrow, 1986. 332 Pages. \$19.95.

**THE CIA AND THE U.S. INTELLIGENCE SYSTEM.** By Scott D. Breckinridge. Westview Press, 1986. 364 Pages. \$30.00.

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# From The Editor

## **66 YEARS**

With this issue we mark the end of our 66th publishing year. Founded in 1921 as the Infantry School MAILING LIST, our magazine is the oldest continuously published service school journal in the United States (although no issues were printed in 1945 because of a paper shortage).

Your support of the magazine over the years has been outstanding and a real credit to the United States Infantry. We ask that you continue your support in the coming year so that we can keep intact our record of service to the entire Infantry community.

If you know someone you think might want to subscribe to INFANTRY but who does not know the magazine or does not know how to enter a subscription, please send us that person's name and address and we'll see that he gets the word, plus a free copy of one of our recent issues.

At this time of the year, too, you might consider entering a gift subscription for a relative, friend, or colleague. We'll send a special gift card in your name to the recipient.

To all of our readers and to all of our supporters we wish you a beautiful and bountiful Holiday season and all of the best in 1987.

## **COMING IN INFANTRY**

**"The Regimental System," by Major John A. Hamilton.**

**"Soldier's Load," by Captain William C. Mayville.**

**"Divide and Conquer," by Robert E. Rogge.**

## **BACK COVER:**

During a multinational chemical defense exercise in Germany, a soldier from the 8th Infantry Division, covered with powder from a decontamination operation, resumes his role in the exercise.











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